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Final Report

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**ENHANCED PLANNING REVIEW OF THE
MIAMI METROPOLITAN AREA**

May 1996

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ACKNOWLEDGMENTS

This report is the third in a series of Enhanced Planning Reviews (EPRs) of major metropolitan areas produced for the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) by the Volpe National Transportation Systems Center (Volpe Center), Research and Special Programs Administration, U.S. Department of Transportation (USDOT). An earlier series of nine independent planning reviews of major metropolitan areas were published by the Volpe Center for the FHWA and FTA in 1994.

William Lyons is the Volpe Center Project Manager for the EPRs. Philip vanderWilden was the lead author and analyst for this report. Other contributors included Karen Kho and Tilly Chang, Center for Transportation Studies, Massachusetts Institute of Technology, and Sarah Siwek, under contract to the Volpe Center.

Overall guidance for the EPRs, including production of this report, was provided by the Program Manager, Deborah Burns, and Sam Zimmerman, Director, both from the Office of Planning Operations, FTA; and Sheldon Edner and Barna Juhasz, Chief, both from the Metropolitan Planning Division, FHWA.

The federal review team--consisting of staff from FTA Headquarters and Region IV Offices; FHWA Headquarters, Region 4, and the Florida Division; the United States Environmental Protection Agency (USEPA); and the Volpe Center--participated in all aspects of the EPR, including reviewing drafts of this report.

A draft of the Overview Report was provided to the Metro-Dade Metropolitan Planning Organization (MPO), Florida Department of Transportation (FDOT), and other participating major transportation agencies in the metropolitan area for review and comment. The Final Report adds background information for the observations and recommendations in the Overview Report and is written for public distribution. The assistance of local agency staff throughout the EPR is gratefully acknowledged. The Final Report, which was not reviewed in its entirety by the local agencies, is the responsibility of the federal agencies. Participating federal review team members are listed in the Introduction and state, regional, and local staff are listed in Appendix B.

Copies of the other reports can be requested from: Federal Transit Administration, Metropolitan Planning Division, fax (202) 493-2478 or Federal Highway Administration, Metropolitan Planning Division, fax (202) 366-7660.

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Glossary of Acronyms and Abbreviations

ADA	Americans with Disabilities Act
BCC	Board of County Commissioners
BPAC	Bicycle/Pedestrian Advisory Committee
CAAA	Clean Air Act Amendments
CBD	Central Business District
CDMP	Comprehensive Development Master Plan
CFR	Code of Federal Regulations
CMAQ	Congestion Management Air Quality Improvement Program
CMS	Congestion Management System
CTAC	Citizens' Transportation Advisory Committee
CUTR	Center for Urban Transportation Research
DCMMP	Dade County Mobility Management Process
DCPIP	Dade County Public Involvement Process
DEIS	Draft Environmental Impact Statement
DERM	Department of Environmental Resource Management
DOT	Department of Transportation
DSS	Decision Support System
ECO	Employee Commute Option
EPR	Enhanced Planning Review
FAA	Federal Aviation Administration
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FIU	Florida International University
FRA	Federal Railroad Administration
FSUTMS	Florida Standard Urban Transportation Model Structure
FTA	Federal Transit Administration
GIS	Geographic Information System
HOV	High Occupancy Vehicle
I/M	Inspection and Maintenance
IMS	Intermodal Management System
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
LOS	Level of Service
LRTP	Long Range Transportation Plan
MARAD	Maritime Administration
MDTA	Metro-Dade Transit Agency
MIA	Miami International Airport
MIC	Miami Intermodal Center
MIS	Major Investment Study
MMP	Mobility Management Process
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization

Glossary of Acronyms and Abbreviations (continued)

MVIP	Motor Vehicle Inspection Program
NEPA	National Environmental Policy Act
NHS	National Highway System
PTMS	Public Transportation Management System
ROW	Right of Way
SFRPC	South Florida Regional Planning Council
SIP	State Implementation Plan
SMP	Strategic Management Plan
SOV	Single Occupancy Vehicle
STP	Surface Transportation Program
TAZ	Transportation Analysis Zone
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
TIPDC	Transportation Improvement Program Development Committee
TMA	Transportation Management Area
TMS/H	Traffic Monitoring System for Highways
TPC	Transportation Planning Council
TPTAC	Transportation Plan Technical Advisory Committee
Tri-Rail	Tri-County Commuter Rail Authority
TSM	Transportation Systems Management
UPWP	Unified Planning Work Program
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Travelled
Volpe Center	John A. Volpe Transportation Systems Center, Research and Special Programs Administration, US Department of Transportation

Executive Summary

The Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) have initiated a series of joint Enhanced Planning Reviews (EPRs) to assess the impact of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) on the planning processes conducted by the transportation agencies serving metropolitan areas. The EPRs are also intended to determine the effects of planning on transportation investment processes. The information collected in the EPRs is intended to be of assistance to individual metropolitan areas in their continuing efforts to improve transportation planning practice, and to federal agencies in formulating policy and identifying technical assistance needs among agencies engaged in metropolitan planning.

The EPR for Miami included a federal site visit from March 20 through March 23, 1995. At the conclusion of the site visit, the federal review team presented preliminary observations and recommendations to the local agencies taking part in the review. The team then formulated several additional observations as a result of the further review of documents and notes. These observations were incorporated into a draft Overview Report which was distributed for review and comment to the Metropolitan Planning Organization (MPO) and other local participants in the EPR. The Overview Report formed the basis for this Final Report, which describes the EPR in greater depth and is intended for public distribution.

The following is the summary conclusion and a complete set of the observations and recommendations presented in the Overview Report. The section where the observations and recommendations are discussed in context are noted in parentheses.

The federal team identified several areas where the MPO and the participating agencies in the local transportation planning process have successfully implemented comprehensive and coordinated planning practices. In particular, these include the following areas:

- Cooperation between state and local agencies and the MPO.
- Multimodalism.
- Development of an integrated management system.
- Public involvement process.

Conversely, the federal team identified specific areas to be addressed in order to continually improve the transportation planning process in the Miami metropolitan area. These include the following areas:

- Timely update of the Long Range Transportation Plan (LRTP).
- Specification of project identification criteria.
- Incorporation of a regional long-range vision into the LRTP.
- Improvements to travel demand modeling.

A. Organization and Management of the Planning Process

1. Inter-Agency Coordination: Difficulty in developing cooperative working relationships among all parties involved in a complex planning process is a common issue. The Metro-Dade planning process appears to be successfully integrating state, regional, county, and local agencies through its membership and committee composition and shared responsibility for the products of the planning process. These results are particularly apparent in the innovative approach to intermodal project development (III.B).

B. Development of the Transportation Plan, Transportation Improvement Program (TIP), and Unified Planning Work Program (UPWP)

1. LRTP Update: Updating the 2015 LRTP as soon as possible will be very important to the metropolitan area. The update should reflect a multimodal evaluation of a range of alternative transportation investments to address short-term and long-term needs, and be financially constrained. An effective LRTP would provide a clear link to, and justification for, transportation investments and strategies contained in the TIP and the UPWP. The FHWA and FTA will consider the status of the LRTP update in making their planning finding on the new TIP. Without an updated LRTP, only "grandfathered" or "exempt" projects may be able to proceed (IV.A).
2. Vision: The evolving vision of the region's economic future, based on its strengths, expected expansion, and the extensive integration of project planning and multimodal connections between air, land, and sea components of the transportation system, should be clearly articulated and developed as appropriate in the 2015 LRTP. This will provide a broad framework for the integration of transportation planning and investments into the next century. The planning effort will be further enhanced by: (IV.A)
 - Incorporating the direction and priorities of the Metro-Dade Transit Agency (MDTA) Strategic Plan update into the current work on the 2015 Plan update.
 - Integrating, incorporating, and referencing strategic plans for the port and airport where relevant in the current and future updates to the LRTP.
3. Project Identification Criteria: To support effective decision making and public involvement, the LRTP and the TIP should clearly specify project evaluation criteria used to identify and prioritize projects, and specify how and at what point (at the agency or metropolitan level) those criteria are applied. Clearly defined criteria will help all agencies and the public understand the project prioritization processes, which, in turn, are likely to encourage wider participation of all interested parties (IV.B).

C. Financial Planning and Financial Constraint

1. Financial Resources Plan: With the multitude of projects and multimodal proposals under consideration, disciplined and rigorous financial planning is vital to the successful realization of the Metro-Dade transportation program. The MPO, State and transit

operator should continue to place a high priority on the development and update of financial plans which reflect fiscal constraint and alternative revenue strategies (V.A).

2. Transit/Port/Airport Financial Elements: A complete regional transportation financial plan will require the inclusion of transit investments which are contemplated over the long-term as well as operating and maintenance costs for the short and long-term. Furthermore, as appropriate, financial elements of the Port and Airport financial plans should be referenced where they are relevant to the surface transportation system (V.A).
3. Fiscal Constraint: While the 1995 TIP is financially constrained, future revised TIPs would be more effective documents if they contain additional tables showing total revenue sources by source compared to total expenditures by expenditure category to clearly illustrate the TIP's financial constraint (V.A).
4. Operation and Maintenance Costs: Operating and maintenance costs of the existing transportation system should be clearly identified in both the LRTP and TIP documents to ensure a complete picture of system expenditures (V.A).
5. Flexible Funding: The allocation of funds to transportation improvements should be based on the outcome of the planning process, the evaluation of investment options, and the priorities established thereby. Federal requirements provide flexibility to MPOs, states and transit operators to allow multimodal investments to be made with federal funds, in accordance with the priorities and long-term objectives of the metropolitan regions, in cooperation with the states (V.A).
6. Discretionary Funds: The financial plan for the updated 2015 LRTP and 1996 TIP should address all sources of funding, including FTA Section 3 Discretionary Funds, using reasonable assumptions based on historical trends (V.A).

D. Major Investment Studies (MIS)

1. MIS Process: Effective implementation of the MIS process in the Miami metropolitan area will depend on an adopted process which clearly identifies how the need for an MIS is determined and how an MIS will be administered (V.B).

E. Congestion Management System (CMS) and Other ISTEA Management Systems

1. Management Systems Integration: Initial efforts to integrate ISTEA management systems and to fully incorporate systems outputs into the local area planning process appear innovative and merit further support. Development and use of integrated data that result from this effort will significantly aid the transportation planning process (V.C).

F. Air Quality and Conformity

1. Air Quality Criteria: Consideration of air quality emissions impacts of specific projects should be an integral part of the TIP development process to ensure development of a conforming TIP (V.D).
2. Conformity Status: The MPO's planning process should address the possible impact of the following items on Miami's maintenance status: (V.D).
 - Demographic trends identified in the LRTP.
 - Monitoring emissions budgets for compliance with maintenance area requirements.
 - Continuing public education efforts on the impact of transportation investment decisions and individual transportation choices on the area's air quality and maintenance status.
 - Future changes to the SIP such as modified enhanced Inspection and Maintenance (I/M).

G. Public Involvement

1. Public Involvement: Opportunities for public involvement at many stages in the transportation planning process, including the update to the LRTP, through the Citizens' Transportation Advisory Committee (CTAC) and other public forums appear to be effective and should be continued. The public involvement efforts also under way regarding the East-West Corridor and Miami Intermodal Center (MIC) studies have also been impressive and could be extended to other planning efforts in the area (V.E).
2. Community Outreach: The MPO should continue to examine outreach efforts of the transit agency to the public, the port to cargo representatives and the cruise industry, and the airport to both passenger and freight interests, for examples of successful and proactive public communication techniques. The MPO could incorporate these practices, as appropriate, in an effort to continually provide expanded opportunities for public input into the transportation planning processes (V.E).
3. Audio/Visual Aids: The MPO should specifically cite the existing availability of hearing and vision-impaired aid, as well as the televised broadcast of MPO policy meetings in their adopted Dade County Public Involvement Process (DCPIP) document (V.E).

H. ISTEA Fifteen Factors

1. General: The MPO's comprehensive consideration of the ISTEA Fifteen Factors in the planning process would strengthen the planning process and the LRTP (V.F).
2. Land Use: Formal linkages between land use and transportation planning, encouraged by ISTEA, are difficult to accomplish in most areas. Coordination and consistency between the County's Comprehensive Development Master Plan (CDMP) and products of the MPO

planning process and the Florida Department of Transportation's (FDOT) restriction on expansion of highway capacity provide a strong foundation for working toward this challenging but vital linkage. Furthermore, the County's application to be designated an exception area to the State's concurrency requirements represents a clear recognition of the link between development, the transportation system, and local land use patterns (V.F).

3. Land Use/Transit Use: Addressing the impacts of local land use, parking availability, and pricing policies on mode choice and, in particular, on transit ridership would greatly assist the planning process. The MPO could explore possibilities for revising local land use plans and the CDMP to establish parking place "maximum" rather than "minimum" limits in the development process, particularly in areas well served by transit. Other incentives to shift mode choice could also be incorporated in the MPO's project identification criteria and processes (V.F).

I. Integration of Strategic Transportation Planning - Multi-Modalism

1. Multi-modalism: The East-West Corridor and MIC studies demonstrate broad inclusion of local transportation agencies, private industries, and the public. Efforts at public outreach and the incorporation of public feedback into the planning process are also aggressive. These projects could provide a model for many aspects of multi-modal planning, private/public sector coordination, and public involvement (VI.A).
2. Linkage/Financial Constraint: The multimodal studies currently under way should be reflected in the 2015 LRTP update. Implementation of these improvements should be consistent with the financial plan developed to support the 2015 LRTP and TIP (VI.A).
3. Public/Private Partnerships: The involvement of federal, state, and local transportation agencies and representatives of the cruise, freight, and car rental industries in FDOT's MIC and East-West projects provides a unique opportunity to explore the potential of public/private partnerships in major transportation projects. Given the pivotal role that the seaport and airport play in the current and future economic vitality of the Greater Miami metropolitan area, coupled with the need for extensive investment to retain their respective shares of passenger and freight markets, regional success will depend on collaborative and innovative financing mechanisms involving private and public sector partnerships (VI.A).

J. Integration of Strategic Transportation Planning - Transit

1. Linkage to the LRTP: The Metro-Dade MPO should continue to incorporate the direction and priorities of the MDTA Strategic Plan update into the current work on the 2015 Plan update. Conversely, projects and priorities contained in the 2015 Plan update should be reflected in future MDTA Strategic Plan updates (VI.B).

K. Travel Demand Forecasting

1. Model Updates: Metro-Dade MPO and County Planning Department interests would be served by developing and adopting a formal schedule and process for on-going model updates and validation, including the timely updating of socio-economic and demographic data inputs to the model (VII).
2. Model Upgrades: Credible modeling assumptions and outputs are critical to the planning process. The MPO should continue to upgrade its modeling capabilities in concert with the recommendations resulting from the recently completed peer review. Improvements recommended in the review include development of peak-hour trip assignments, the application of trip distribution impedances including distribution against a congested network, and the factoring of highway/transit pricing in trip distribution. These efforts should also take into consideration, and be coordinated with, statewide approaches to modeling being developed by the Statewide Modeling Task Force (VII).
3. Model Consistency: The Metro-Dade MPO would be substantially benefitted by establishing a process to guarantee the consistency of modeling updates in order to ensure that local transportation agencies are using the same versions of the current model and to ensure that modeling assumptions used in the transportation planning process are shared (VII).

I. Introduction

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 significantly changed the law governing metropolitan transportation planning. In response to the changes introduced by ISTEA, the FHWA and FTA issued revised planning regulations on October 28, 1993, setting new requirements for the transportation planning processes. The requirements are presented in 23 CFR Part 450 and 49 CFR Part 613, Statewide and Metropolitan Planning Final Rule. The Clean Air Act Amendments of 1990 (CAAA) also imposed rigorous new transportation planning requirements in metropolitan areas, particularly those that are designated nonattainment or maintenance areas for air quality.

In support of the implementation of the revised regulations, FHWA and FTA jointly established a schedule of EPRs. The EPRs are intended to determine the impact of planning on transportation investment processes. The EPRs also provide a technical assessment of the transportation planning and programming processes, including consideration of the six focal points identified by the FHWA and FTA Administrators for certification. The six focal points are: Financial Constraint and Financial Planning; Major Investment Studies; Congestion Management Systems; the Planning Process and Links to the Conformity Requirements of the Clean Air Act Amendments of 1990; the Public Involvement Process; and the ISTEA Fifteen Planning Factors.¹ Of equal importance, EPRs will provide a forum for dialogue and the exchange of information on perspectives and concerns related to ISTEA between FTA and FHWA headquarters and field staff, and state and local officials responsible for metropolitan area transportation planning.

Additionally, EPRs will provide information for future long-term federal policy making, including possible legislative and regulatory changes; identify national issues and trends; and document national case studies of best professional practice. This information will also be used to help identify how future federal technical assistance programs can best assist MPOs and other planning agencies in carrying out the requirements of ISTEA. Finally, EPRs are intended to support progress toward meeting ISTEA requirements.

The EPR has four parts; a review of planning documents, a site visit to the area, a summary draft Overview Report, and the issuance of this Final Report. At the conclusion of the site visit, the federal agency participants in the EPR presented preliminary observations and recommendations to the local agencies taking part in the review. The team then formulated several additional observations as a result of the further review of documents and notes. These observations were incorporated into a draft Overview Report distributed to the MPO and other local participants in the EPR for review and comment. The Overview Report formed the basis for this Final Report, which describes the EPR in greater depth and is intended for public distribution.

This report presents the results of an EPR conducted jointly by FHWA and FTA in the Miami metropolitan area. This report considers the regional transportation planning process as it existed

¹An additional factor was added to the original fifteen factors identified in the Metropolitan Planning Final Rule after the Miami site visit was conducted. 17

at the time of the site visit as well as future trends. The review team acknowledges that this is an evolving process.

A federal review team consisting of FHWA and FTA headquarters and regional staff, FHWA division staff, USEPA regional staff, and US DOT/Volpe Center staff conducted the site visit on March 20 through March 23, 1995. The federal team consisted of:

Federal Transit Administration

Sam Zimmerman, Office of Planning
Roger Krah, Region IV Office

USDOT/Volpe Center

William Lyons, Project Manager
Philip vanderWilden, Project Staff
Sarah Siwek, Consultant

Federal Highways Administration

Ben Williams, Region 4 Office
Larry Anderson, Region 4 Office
Victoria Bernreuter, Florida Division Office

US Environmental Protection Agency

Eric Maurer, Region 4 Office

Research assistance was provided by Tilly Chang and Karen Kho of the Massachusetts Institute of Technology.

Local participants in the site visit included the Metro-Dade MPO, which is the MPO for the Miami metropolitan area; FDOT; Florida Department of Environmental Protection (FDEP); Dade County Departments of Seaport, Planning, Public Works, and Environmental Resources Management; Metro-Dade Transit Agency (MDTA); South Florida Regional Planning Council (SFRPC); Tri-County Commuter Rail Authority (Tri-Rail); and the Broward and Palm Beach County MPOs. The review team also met with local elected officials and members of the CTAC, as well as members of the local business community.

A list of MPO policy board members, the participants in the EPR site visit, and the agenda for the site visit, are provided in Appendices A, B, and C of this report. A list of the documents reviewed as part of the EPR is provided in Appendix D.

II. The Miami Metropolitan Area

The Miami metropolitan planning area is defined by the boundaries of Dade County, incorporating the City of Miami and 25 other local municipalities as well as County unincorporated areas as shown in the map at the end of this section. Miami's strategic location and multilingual work force position the city to be the "Hub of the Americas." As such, the area serves as a major gateway between the U.S., Caribbean, Central and South America, and other international destinations for both passengers and cargo.

The Miami metropolitan area is no exception to the growing congestion problems faced by many major urban areas. In fact, the Texas Transportation Institute rated Miami's traffic congestion as the fourth worst of all urban areas in the nation. A significant factor adding to the growth of congestion is Miami's development as a sprawling, low density metropolitan area. The 2010 Long Range Transportation Plan (LRTP) identifies existing and potential increased congestion as having major adverse ramifications for the local economy and quality of life.

Until the mid-1970's, most of the employment in Dade County was concentrated in the Central Business District (CBD) in downtown Miami. Since then, the development of suburban activity centers in the County has dispersed employment throughout the area, with a corresponding development of low density residential development and urban sprawl. Major suburban employment centers include the Miami International Airport (MIA) and its vicinity, downtown Coral Gables, and the Dadeland/Datran area.

A. Projections and Forecasts

According to revised projections released by the Dade County Planning Department in March of 1995, the population of Dade County is predicted to increase by 700,000 to 2.8 million residents by 2010, an increase of 35% over the next 15 years. Foreign immigration is expected to account for two-thirds of the 700,000 projected new residents as a result of the recent immigration agreement reached between the U.S. and Cuba in 1994. The 2010 LRTP projects employment to increase by 363,366 with the total number of jobs reaching 1,256,354 by 2010. The County's recent revisions to population projections are likely to increase these employment projections even further.

The Metro-Dade MPO planning area is divided into six sub-areas. A review of the sub-area analyses from the 2010 LRTP reveals that the CBD area is projected to continue to account for only 10% of employment and 1% of the population, attesting to a pattern of continued low density sprawl. However, congestion in the CBD area will continue to be a concern with projected employment growth of some 54% by 2010. Non-CBD oriented growth is projected to continue to experience the largest shares of employment and population through 2010. Taken together, the West and Southwest areas are projected to account for 68% of future job growth. By 2010, the West area, which includes the airport, is projected to account for 24% of the population and 32% of employment while the Southwest area will account for 33% of the population and 26% of employment.

Suburbanization in the Miami metropolitan area has changed travel patterns from CBD-oriented

peak hour travel to the more diffuse suburb-oriented commutes which has encouraged the use of private automobiles. According to Metro-Dade Transit Agency (MDTA) documents, more than 95% of urban travel in the area is made using automobiles. The 1990 Census journey-to-work data showed that less than 6% of the workers in the metropolitan area use transit for work trips. At present, the MDTA projects that more than 60% of the key commuter roadway facilities in Dade County already operate below Level-of-Service (LOS) standards adopted in the County's Comprehensive Development Master Plan (CDMP). Average Vehicle Miles Travelled (VMT) for these roadways is projected to increase by 45% by the year 2010. Average daily person-trips are expected to increase by about 37% between 1986 and 2010 to a total of 8.01 million daily person trips. FDOT's recent implementation of the Intrastate Highway System Policies and Priorities legislation, which will limit the amount of capacity that can be added on Florida's highway system, presents a significant challenge as to how the region will accommodate the increased demand for travel.

Finally, to accommodate additional passengers and cargo, both the airport and the port plan major expansions which are projected to have a significant impact on the existing transportation network in the area. Passenger (both domestic and international) and cargo forecasts for MIA indicate average annual growth of 3.9% and 4.4%, respectively, from 1990 through 2010. The yearly volume of cruise passengers at the Port of Miami is projected to increase from the current 3 million to 5 million by the year 2005 with the addition of 8-10 new cruise ships based in Miami, while cargo handled at the Port is projected to increase from 6 million to 10 million tons by the year 2000.

B. Regional Transportation System

The existing transportation system within Dade County consists of the following facilities:

Highways: There are a total of approximately 2,930 lane-miles of state roadways in Metro-Dade County and many more county and local roads. Most of the projects in the LRTP and the TIP call for maintenance of existing road structures with limited capacity expansion. FDOT has enacted Intrastate Highway System Policies and Priorities legislation, which limits the number of general use lanes to six (with a total of ten lanes) on Florida's highway system.

Transit: MDTA operates the County's public transit within Dade County, including:

- Metrorail A 21-mile/21-station heavy rail system
- Metromover A rubber-tired automated guideway 10 station loop which serves the downtown Miami core, a distributor system for Metrorail
- Metrobus A 576 bus, 63-route bus system which provides local routes, and special, limited and express service
- Paratransit Specialized, demand-responsive services.

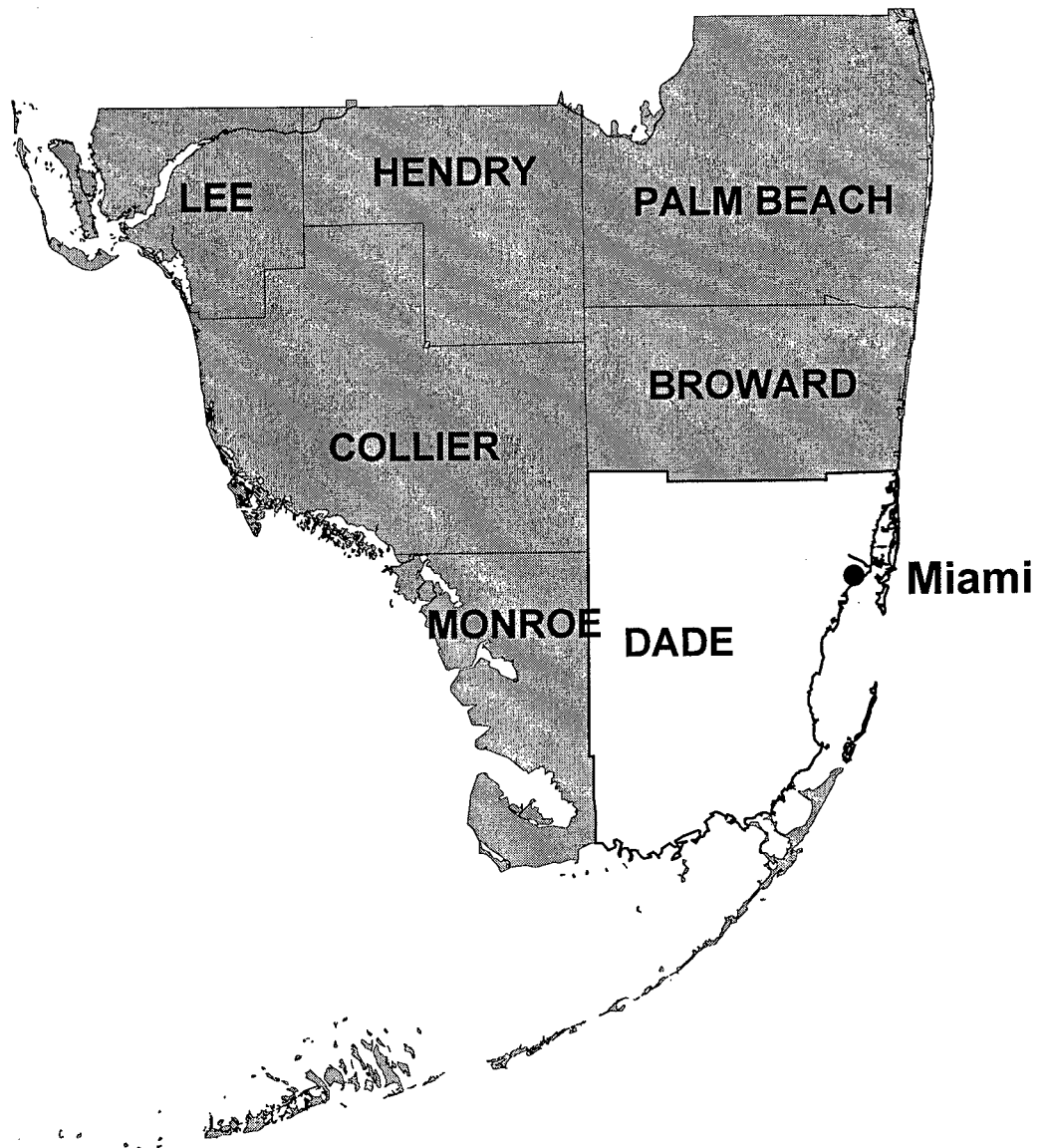
Other Transit: The Tri-County Commuter Rail Authority (Tri-Rail) operates a heavy rail system consisting of 15 stations located from north to south through Palm Beach, Broward, and Dade Counties. Expansion of the system to the proposed site of the MIC is currently under way.

Port: To ensure its position as the "Cruise Capital of the World," the Port of Miami is currently embarking upon a \$300 million expansion which will enhance existing cruise passenger facilities and add new capacity to handle new cruise ships that will be based in Miami. The Port has recently increased its cargo handling capacity and has further plans to increase the cargo infrastructure and space available for containerized cargo. The State and the Dade County Port Department are currently conducting a \$10.3 million study examining construction of a direct tunnel link between the port and the interstate highway system to improve port access. Traffic levels at the Port of Miami are projected to reach 56,000 vehicles per day within five years.

Airport: Current facilities at MIA including gates, the terminal building area, public parking, and the cargo area are already judged to be at or beyond capacity. The Airport Master Plan calls for an estimated \$3.6 billion in improvements through the year 2010 which will be funded through Federal Aviation Administration (FAA) grants, passenger facility charges, and airport funding (landing fees, rents, etc.). Future explosive growth is projected to result in deficient levels of facilities at the airport as well as transportation infrastructure servicing the airport, and, in particular, highways.

Bicycles/Pedestrians: The current Unified Planning Work Program (UPWP) includes Comprehensive Bicycle/Pedestrian Planning Programs through which the MPO Governing Board has authorized the County Public Works Department to develop the Dade County Bicycle Facility Plan and the MPO has also developed a Pedestrian Mobility Plan. Reports have also been prepared for the MPO as part of the Congestion Management Plan which identify bike path and pedestrian enhancements in the CBD and surrounding area. The current TIP allocates \$1.6 million in federal Surface Transportation Program (STP) enhancement funds for bicycle networks and bicycle and pedestrian enhancements.

Map of the Metro-Dade MPO Area



III. Organization and Management of the Planning Process

A. Metropolitan Planning Organization Designation and Membership

The Metro-Dade MPO is responsible for the coordination of transportation planning in Dade County. The Metro-Dade MPO was created March 23, 1977, under the authority of Chapter 163 of the Florida Statutes and established by Interlocal Agreement between Dade County and FDOT. In order to carry out its duties, the MPO entered into a Management Services Agreement with the Metro-Dade Board of County Commissioners (BCC). The agreement specifies that the County Manager of Dade County will be responsible to the MPO Board for coordination of the planning process and professional, technical, and clerical staffing and services. To this end the County Manager appoints the Director of the MPO Secretariat, whose full time staff of 18 coordinates the activities of the components of the MPO.

The organizational structure of the Metro-Dade MPO, as detailed in the Prospectus for Transportation Improvements adopted by the MPO in 1994, is designed for the administration, coordination and monitoring of the development of planning products in cooperation with its participating agencies. The MPO structure includes the MPO Governing Board, the Director of the MPO Secretariat and the MPO staff, the Transportation Planning Council (TPC), the Citizens' Transportation Advisory Committee (CTAC), the Bicycle/Pedestrian Advisory Committee (BPAC) and various subcommittees. The MPO Governing Board is responsible for reviewing and adopting the LRTP, the TIP, and other products of the planning process. The MPO Governing Board is made up of 16 voting and two non-voting members designated by the Governor of Florida including:

- All thirteen Dade County Commissioners (13)
- An elected local municipal official (1)
- A representative of the citizenry of the unincorporated portion of Dade County (1)
- A member of the Dade County School Board (1)
- Non-voting representatives of FDOT (2)

As described in the Prospectus, the overlapping membership of the MPO Governing Board and the BCC of Metro-Dade County is designed to enhance coordination between the two boards in order to facilitate the process of advancing from plans to implementation of transportation projects. The MPO Board/County Council members expressed broad support for this notion during discussions which took part during the EPR site visit. The members also pointed out that their dual role enabled them to ensure that the priorities and concerns of the local transit agency, the MDTA, were fully integrated into the transportation planning process because the MDTA, as a county agency, is represented by the County Council members. Furthermore, in their dual roles as County Council/MPO Board members, some County Commissioners sit on the boards of Tri-Rail and the South Florida Regional Planning Council (SFRPC), which provides for enhanced regional coordination with local operating agencies and the MPOs in Broward and Palm Beach Counties.

The TPC is responsible for the technical adequacy of the MPO planning program and advises the

Governing Board on the various program actions. Members of the TPC include:

- Directors and their designee (appointed by the County Manager) of County departments involved in the transportation planning process including the following departments: Planning, Public Works, Port, Aviation, and Environmental Resources Management.
- Director and their designee from the County's Developmental Impact Committee
- Director and their designee of the MDTA
- Director and their designee of the Tri-Rail
- Representatives (2) from FDOT District 6 Office
- Representative of the FDEP
- Representative of the Dade County League of Cities
- Representative of the Dade County School Board
- Representative of the SFRPC(non-voting)
- Director of the MPO Secretariat (non-voting)

The TPC relies on three standing committees with responsibility for major products of the transportation planning process including:

- UPWP Committee
- Transportation Plan Technical Advisory Committee (TPTAC)
- Transportation Improvement Program (TIPDC) Development Committee

The TPC also establishes inter-agency task forces and special committees to ensure coordination of the planning processes as needs arise. Coordination and guidance of various committee and task force activities are provided by the Director and full-time staff of the MPO.

The CTAC consists of MPO Board appointed members (with recommendations from the County Manager) from both the general public and local civic organizations. CTAC provides citizens with the opportunity to become involved in the transportation process and to evaluate recommendations developed through the MPO planning and programming process before those recommendations are voted on by the MPO Board. Membership is discussed in Section V.E of this report. The BPAC also consists of MPO Board-appointed members upon the recommendation of the County Manager. The members include organizations and groups such as bike and walking/running clubs which are responsible for reviewing bikeway and pedestrian mobility planning and coordinating of public awareness of bicycle and pedestrian transportation modes.

B. Institutional Relationships

The structure of the MPO and the composition of the various MPO councils and its subcommittees reflect the cooperative spirit of ISTEA through the inclusion of representatives from all major agencies involved in the transportation planning process including: MDTA; FDOT; Dade County Departments of Airports, Seaport, Planning and Public Works; Tri-Rail; SFRPC; the Dade County League of Cities; and the public. As an example, the LRTP 2015 Update Steering Committee is managed by an Metro-Dade MPO staff manager and includes representatives of most of the agencies listed above. This illustrates the collaborative approach of various agencies and

stakeholders toward identifying current and future shortcomings in the transportation system and identifying options to address these problems. The cooperative relationship between all agencies involved was readily apparent during the site visit to Miami. The federal team sometimes had to inquire who was with which agency when staff from all agencies involved in the process referred to themselves as "we" regardless of agency.

Metro-Dade MPO's full time staff of 18 is augmented by staff from participating agencies as well as consultants in developing the products of the planning process. This staff approach is reflected in the MPO's direct budget of \$1.9 million of which approximately 32% is for other agency support and 21% is for consulting services. Personnel from participating agencies are assigned to perform specific MPO duties as needs arise. Each agency participating in the planning process is responsible for specific elements as outlined in the Prospectus and summarized below:

- *Dade Public Works Department:* Carries out highway surveillance activities, assists in developing MPO plans and priorities for arterial street improvements, and estimates traffic impacts for Development Impact Committee Reviews.
- *MDTA:* Operates all public mass transit in the metro area, assists in developing MPO plans and priorities for urban transit improvements, and develops plans for paratransit services.
- *Dade Planning Department:* As the areawide comprehensive planning agency, the department reviews the LRTP for consistency with the CDMP and other plans, collects and develops land use and socio-economic data for input into travel demand forecasts, and determines environmental impacts of proposed transportation projects.
- *Dade County Aviation Department:* Provides input regarding landside access requirements and evaluation of highway and transit plans with respect to impact on the airport.
- *Dade County Port Department:* Provides input regarding landside access requirements and evaluation of highway and transit plans with respect to impact on the port.
- *Dade County Environmental Resource Management Department:* Monitors motor vehicle emissions and determines impacts of emissions on air quality standards.
- *Tri-Rail:* Participates in pertinent Metro-Dade MPO planning activities coordinating its plans and services with MPO programs.
- *FDOT:* Participates in all pertinent Metro-Dade MPO planning activities. FDOT staff serve on the TPC. Staff also assist in developing MPO plans and priorities for primary road construction and provide traffic data for projects in the MPO jurisdiction.
- *SFRPC:* Maintains an on-going review of the Metro-Dade LRTP to ensure consistency with the transportation provisions of the Regional Policy Plan for South Florida.

- *Local Municipalities:* Provide timely and organized input into the planning process. Planning proposals and projects are routinely submitted in draft form to municipal authorities from the 26 incorporated municipalities in Dade County for review.

Document timing appears to be well coordinated among agencies. Any amendments to the LRTP are considered on an annual cycle which allows FDOT to review and amend the FDOT Work Program and subsequently allows for those changes to be reflected in the Metro-Dade's TIP. Coordination with FDOT is critical since the projects included in the FDOT Work Program for any given time period are also submitted by FDOT for inclusion in the MPO's TIP for the same period. The timing of amendments is also scheduled to allow for adequate time for public review between major deadlines.

Observations and Recommendations

1. Inter-Agency Coordination: Difficulty in developing cooperative working relationships among all parties involved in a complex planning process is a common issue. The Metro-Dade planning process appears to be successfully integrating state, regional, county, and local agencies through its membership and committee composition and shared responsibility for the products of the planning process. These results are particularly apparent in the innovative approach to intermodal project development.

C. Regional Coordination

Palm Beach and Broward Counties, which border Dade County to the North, have their own MPOs responsible for transportation planning. However, coordination between the three MPOs is required to address regional planning concerns and to meet air quality conformity requirements. The Miami-Ft. Lauderdale-West Palm Beach area was recently redesignated as an Ozone Maintenance area, which includes parts of all three counties. Coordination is reflected by the inclusion of representatives from the Palm Beach and Broward County MPOs on the steering committee for Metro-Dade's 2015 LRTP update which is currently under way.

Metro-Dade MPO's UPWP includes a Regional Council Transportation Planning Support project, which is intended to facilitate regional transportation planning, encourage multi-jurisdictional coordination of the multi-modal network, and consider extra-jurisdictional impacts. The South Florida Regional Planning Council (SFRPC) began this project in FY 1990. In 1992, SFRPC organized a Multi-modal Regional Transportation Systems Committee to address issues concerning transportation and development patterns, connectivity, modeling, corridor planning, and aviation system planning. The Metro-Dade MPO is also a member of the Florida MPO Advisory Council, which serves as a forum for Florida's 25 MPOs to work in coordination with each other and other state agencies such as FDOT.

IV. Development of the Plan, Transportation Improvement Program, and the Unified Planning Work Program

A. Long Range Transportation Plan

ISTEA requires that a new or updated Plan, reflecting ISTEA requirements, be adopted by December 18, 1994. At the time of the EPR, an updated LRTP was not yet in place for the Miami metropolitan area and, according to the MPO staff, the Year 2015 LRTP was not expected to be adopted before the Fall of 1995. The current LRTP 2010 was adopted in 1990 prior to the passage of ISTEA and was not financially constrained (as discussed in Section V.A). Every November thereafter, the LRTP was updated and amended to reflect changes in project priorities and implementation schedules.

The 2015 LRTP update process is described as a task in the 1995 UPWP. The process involves many preliminary steps including the updating of plan databases, socio-economic forecasts, travel forecast models, travel networks, goals and policies, service criteria and a number of supporting steps. According to MPO staff, while the update was begun in the 1993-94 fiscal year, the delay in meeting the update deadline for December of 1994 was due in part to the impact of Hurricane Andrew which hampered the Dade County Planning Department staff's efforts to update many of the required elements.

The LRTP 2015 update is managed by a full time Metro-Dade MPO project manager who oversees the work of the consulting firm contracted to develop the LRTP. The LRTP is developed with technical staff input from various County (including MDTA), State, and local transportation agencies through the TPTAC's ongoing work and their membership on the 2015 LRTP Update Steering Committee. The Steering Committee is headed by the project manager and the Director of the MPO and also includes representatives of the public (through CTAC). Input from Dade County municipalities is also requested and considered on a regular basis. The inclusion of all parties in the LRTP update process reflects the cooperative spirit called for in ISTEA.

The Steering Committee meets twice per month to discuss progress on the update. The update is a multi-step process which includes identifying the transportation system needs, assessing what would be required to meet those needs through highway only and transit only alternatives, and then combining those alternatives in the most efficient manner to meet the financial constraint required in ISTEA. The final LRTP will then contain a financially constrained plan and a needs plan which considers all needs regardless of available resources.

In March of 1994, the MPO Board approved a set of revised goals and objectives for the 2015 LRTP. While the existing 2010 LRTP includes eight objectives which incorporated the essence of many of the fifteen factors before the passage of ISTEA, the revised objectives explicitly reflect the fifteen factors. The 2015 objectives are grouped under five categories:

1. Multi-modal Transportation Systems Development
2. Traffic Flow/Mobility
3. Social
4. Environmental
5. Economic

According to MPO staff, new project selection criteria based on the 2015 LRTP objectives are being developed and will be applied to the 2015 LRTP. The Steering Committee intends to rank projects by the criteria established for each of the five categories of objectives listed above. They would then address fiscal constraint issues on a project by project basis and re-rank the projects based on fiscal constraint analysis. In the current 2010 LRTP, estimated levels of urban travel congestion based on adopted LOS standards from the County's CDMP appear to be the primary project selection criteria. The new criteria being developed for the 2015 LRTP update are intended to incorporate other measures as well as LOS standards in the project prioritization process. When this EPR was being conducted, little detail was available regarding how these new criteria were being developed, how they would be applied, and whether they would be applied at the agency or the MPO level.

In 1991, the County adopted revised short and long-term LOS standards into the CDMP. The long-term standards, which take effect after 1995, vary by location (outside the urban development boundary, inside the urban infill area, or inside the special transportation area) and by transit availability. For example, LOS E and above (100% + of capacity) ratings will apply to areas within the urban infill, special transportation areas, and between those areas and the urban development boundary where transit is available.

The current 2010 LRTP prioritizes projects in five-year increments of the twenty-year planning cycle. Priority 1 projects respond to existing traffic problems with funds programmed in the TIP, while Priorities 2, 3, and 4 address projected traffic problems and long range travel needs. According to MPO staff, the updated 2015 LRTP will incorporate this same scheme for prioritizing projects.

While the current 2010 LRTP identifies six corridor analysis areas, it does not present a clear vision for the planning area linking transportation improvements identified in the LRTP and the TIP to the region's future. Furthermore, the 2010 LRTP provides little discussion of the impact of the airport and the port on the local transportation network or the needs for capacity enhancements at either of those sites. However, during the session focusing on multi-modal integration during the site visit, MPO staff, FDOT, and local elected officials expressed a clear vision of the region's future economic vitality as directly dependent upon an efficient transportation system serving both the port and airport for both passenger and cargo movements. This vision depends on critical links between the sites and access to other transportation modes throughout the region. Strategic plan updates for the airport, seaport, and MDTA are all under way at this time (although unavailable at the time of the site visit) which will reportedly reflect this multi-modal vision.

Observations and Recommendations

1. **LRTP Update:** Updating the 2015 LRTP as soon as possible will be very important to the metropolitan area. The update should reflect a multimodal evaluation of a range of alternative transportation investments to address short-term and long-term needs, and be financially constrained. An effective LRTP would provide a clear link to, and justification for, transportation investments and strategies contained in the TIP and the UPWP. The FHWA and FTA will consider the status of the LRTP update in making their planning finding on the new TIP. Without an updated LRTP, only "grandfathered" or "exempt" projects may be able to proceed.
2. **Vision:** The evolving vision of the region's economic future, based on its strengths, expected expansion, and the extensive integration of project planning and multimodal connections between air, land, and sea components of the transportation system, should be clearly articulated and developed as appropriate in the 2015 LRTP. This will provide a broad framework for the integration of transportation planning and investments into the next century. The planning effort will be further enhanced by:
 - Incorporating the direction and priorities of the MDTA Strategic Plan update into the current work on the 2015 Plan update.
 - Integrating, incorporating, and referencing strategic plans for the port and airport where relevant in the current and future updates to the LRTP.

B. Transportation Improvement Program

The TIP is prepared by the MPO in cooperation with participating agencies. The TIP is updated annually and covers a five-year horizon. The adopted 1995 TIP specifies proposed transportation improvements to be implemented in Dade County from fiscal years 1994/95 through 1998/99 with a primary emphasis on the first three years of the program. The TIP Development Committee (TIPDC) evaluates project proposals solicited from the various transportation planning agencies, FDOT, and from Dade County municipalities. Each agency submits a preliminary list of projects, in order of ranking, with funding sources identified.

The TIPDC reviews submitted projects for their effectiveness and consistency with the LRTP, prioritizes proposals according to regional and local transportation needs and air quality conformity guidance, and recommends a prioritized list to the Transportation Planning Council (TPC). As is the case with the LRTP discussed earlier, project prioritization criteria in the TIP appear to be based on LOS standard deficiencies. While new criteria for use in the LRTP and the TIP are being developed based on the five categories of objectives recently adopted as part of the 2015 LRTP update, the current 1995 TIP does not clearly define project prioritization criteria and it is unclear whether the new prioritization criteria will be applied at the agency level or TIPDC level.

Following the TPC's favorable review, the TIPDC prioritizes all projects eligible for urban

Surface Transportation Program (STP) and Congestion Mitigation Air Quality Improvement Program (CMAQ) funding and reviews other STP-funded projects. The TIPDC also works with FDOT on National Highway System (NHS) and Interstate projects. The MPO Governing Board approves the TIP based upon the recommendations of the TIPDC and the TPC. The approved TIP contains three parts:

- Part I Required by ISTEA describing federally funded projects separately
- Part II Shows all projects by subcategory including projects funded solely through State and local revenues as well as private developer funds
- Part III Shows unfunded needs which will be developed as new funds become available.

Projects listed in Part II of the TIP are classified under the following subcategories:

- *State Program-Interstate and Turnpike:* Includes five major construction categories: Major Highway Projects, Bridge, Safety/Operational Improvements, Major Resurfacing Improvements, and Railroad Crossing and Signal Improvements.
- *County Roads - Secondary:* Divided into new road construction or rehabilitation projects and continuing projects. Includes the programming of Road Impact Fees, which are fees collected to finance roadway capacity improvements to offset development impacts.
- *Local Option Gas Tax:* Lists projects funded by the proceeds of a five-cent tax enacted through a state statute which became effective January 1, 1994. Funds are programmed for transportation expenses needed to meet the requirements of the capital improvement element of the adopted comprehensive plan and are split 74% to the County (with not less than 20% to be used in the unincorporated areas of the county) and 26% to the Cities.
- *Roadway Improvements by Private Sector:* Lists projects that address commitments made by private developers during the regional and local development processes to help mitigate traffic impacts of specific large development projects to meet the requirements of the Dade County Development Impact Committee and Developments of Regional Impact.
- *Airport Development:* Includes significant capital improvements totaling \$386 million over 2 years and \$623 million over the five-year TIP horizon at MIA to fund terminal and concourse expansion and ground transportation improvements as well as land acquisition at Opalocka Airport.
- *Port Development:* Includes significant improvement projects totaling \$112 million over 2 years and \$750 million over 5 years programmed at the Port of Miami funded primarily through general obligation and seaport revenue bonds. Improvements include increased cargo berthing space, additional cargo cranes, cruise passenger terminal expansions and updates, cargo yard enhancements, and port access.

- *Transit Improvements:* Lists major projects such as the Metromover extension, which opened for service in May 1994; construction of an additional station on the Omni/Brickell Extension; and planning and design of the Metrorail to Palmetto extension. In addition, North and East-West corridors will complete alternatives analysis and right-of-way construction, respectively, in 1995. Other projects address capital replacement and expansion needs for vehicles and facilities. Transit center enhancements and pedestrian projects are also scheduled. The five-cent local option gasoline tax provides a dedicated source of local funds to match Federal and State funding for many of these projects.
- *Tri-Rail:* Includes station improvements and track and signal improvements. Also includes implementation of an aggressive program of increasing parking at each of Tri-Rail's 15 stations; details the new Miami International Airport Station, which will be immediately adjacent to the MIA; and plans for corridor acquisition activities and double-tracking in addition to replacing the existing 50-year old track and signal systems.
- *Non-Motorized Component:* Includes projects to address the policy objective of the MPO Governing Board and to implement the objectives of the Dade County Bicycle Facility Plan.
- *Transportation Disadvantaged:* Lists transportation improvements, as required by Florida Statute, which assist the safe and efficient transport of those citizens who need special services and facilities to obtain access to life-sustaining activities.

According to information in the TIP, transportation and land use coordination activities are ongoing and include standard consistency checks with the CDMP and analysis and verification of traffic impacts. Exclusion of a project or facility from the CDMP could prevent Dade County's participation in the project even if it is included in the LRTP. Therefore, it may be necessary to amend the CDMP to implement proposals in the LRTP.

Observations and Recommendations

1. Project Identification Criteria: To support effective decision making and public involvement, the LRTP and the TIP should clearly specify project evaluation criteria used to identify and prioritize projects, and specify how and at what point (at the agency or metropolitan level) those criteria are applied. Clearly defined criteria will help all agencies and the public understand the project prioritization processes, which, in turn, are likely to encourage wider participation of all interested parties.

C. Unified Planning Work Program

The annual program of technical studies and related activities that support the LRTP and TIP is contained in the UPWP. The UPWP is updated annually, and identifies transportation and transportation-related air quality planning and improvement program activities and studies for the Miami metropolitan area that are undertaken each year. The UPWP is developed by the various participating Metro-Dade County agencies and FDOT, and guided by the MPO's UPWP.

Committee. Formal technical guidance is provided by the MPO' Transportation Planning Council (TPC) and the TPC subcommittees. Dade County municipalities review the program prior to adoption. Citizen participation occurs through monthly meetings of the Citizens' Transportation Advisory Committee (CTAC). Participation of the private passenger transportation industry in the development of the UPWP also occurs through the CTAC and special Board Committees.

Projects in the UPWP are organized under four objectives defined by the Program Committee:

- Long Range Planning: Plan for a regional, multi-modal transportation system that is responsive to changes in land use and urban form through the use of state-of-the-art computer simulation techniques combined with a multi-disciplinary perspective.
- Short Range Planning and Management: Plan for maximum cost and performance efficiencies in transportation services and facilities through the development of effective projects, monitoring system performance, and responding to incidents and emergency situations.
- Multi-modal Planning: Plan for a fully multi-modal transportation system which will alleviate travel congestion and adverse impacts of transportation infrastructure and services on neighborhoods and communities, promote efficient automobile use, improve the natural environment through the reduction of air, water, and noise pollution and resource consumption, and enhancing safety across all modes.
- Transportation Planning Decision-Making and Funding: Combine the best features of professional expertise with a proactive citizen and private sector involvement process to institute a transportation planning decision-making procedure that includes all interested groups and heightens the knowledge of the public as to the availability of financial resources and the true long-term and short-term costs of available transportation options.

The objectives are based on the policies defined in the LRTP and in the Metro-Dade CDMP. These are consistent with the transportation goals expressed in the Regional Plan for South Florida as well as with the local comprehensive plans adopted by each of the 26 municipalities in Dade County.

The UPWP identifies specific project tasks related to on-going planning processes and ISTEA planning requirements. Each task description includes identification of funding sources and participating and managing agencies responsible for the task. On-going planning efforts which address ISTEA and CAAA requirements are provided for in separate tasks which include the following: Long Range Plan Update, UPWP Development, TIP Development, Regional Council Transportation Planning Support, MPO Board and Municipal Participation, Technical Committees Support, Transportation and Land Use Coordination, Freight Movement Study for Dade County, Comprehensive Bicycle and Pedestrian Planning Programs, Citizen and Private Sector Involvement and Community Awareness, Development of Dade County Congestion Management System, and Air Quality Conformity Determination Assessment.

V. FHWA and FTA Administrators' Focal Points

The FHWA and FTA Administrators have identified six focal points for the certification reviews being conducted in major metropolitan areas. One objective of the enhanced planning reviews is to gather information which will serve as a prelude to the certification review. For that reason, these focal points are reviewed as part of the enhanced planning review. These focal points are:

- Financial Planning and Financial Constraints
- Major Investment Studies
- Congestion Management Systems and Other ISTEA Management Systems
- Air Quality and Conformity
- The Public Involvement Process
- ISTEA Sixteen Factors

The following sections describe how the regional transportation planning process is addressing each of the focal points.

A. Financial Planning and Constraints

ISTEA requires that all plans and TIPs be financially constrained such that the total costs of projected transportation investments and improvements are covered by projected revenues. As the lead planning agency, an MPO must develop plans which meet this requirement. Close cooperation between the MPO, the state, and participating agencies is required to ensure the development of realistic and constrained estimates.

The Metro-Dade 2010 LRTP, which was adopted prior to ISTEA's passage, is not financially constrained. The twenty-year highway proposals are estimated to cost approximately \$4.1 billion, primarily for capacity expansion and enhancements. The proposed transit improvements are estimated to cost \$11.4 billion. Identified transit needs call for provision of over 60 miles of exclusive right-of-way priority service along six major travel corridors with corresponding increases in bus and rail rolling stock, including the cost of operating the expanded system.

The 2010 LRTP identified insufficient revenues in all areas, assuming continuation of existing sources at current levels. For highways, in addition to an overall 20-year unspecified shortfall, a funding deficit of over \$400 million is predicted for the first 10 years of the LRTP horizon. For transit, the LRTP states that no funds are available for the proposed system needs, except for capital projects for which monies are already earmarked, such as the Metromover extension (approximately \$225 million). In addition to any federal and state funds that would have to be allocated to the rapid transit improvements, substantial local funds would also need to be raised.

As discussed under Section IV.A, the 2015 LRTP update currently under development will include two parts, one part financially constrained and the other, a needs plan identifying the revenues needed to meet all currently identified transportation needs. To address the financial constraint requirement of the 2015 LRTP update, a consulting firm developed a financial resources plan which identified existing and prospective funding sources for transportation

improvements through the year 2015. The financial plan is based on the historical flow of various revenues from federal, state, and local sources and the projected growth in population, vehicle ownership, and tourism. Future revenue projections are calculated using current allocation formulas to distribute federal and state funds, and incorporate local matching revenues derived from sources including the local option gas tax discussed in Section IV.B. Preliminary estimates of available resources from the financial resources plan total approximately \$14.425 billion through the year 2015.

The financial resources plan includes farebox revenues derived from MDTA ridership which project an increase in the proportion of the transit share of the traveling population of 0.5% annually with no change in existing service scheduling or area served. This would represent an increase in passenger boardings of 72% over current boardings by the year 2015. The plan does not include port derived revenue sources despite the fact that port access improvements, similar to airport access improvements, may require substantial investments of resources during the 2015 LRTP planning horizon. The financial resources plan was drafted in December of 1994 and does not include the updated population projections which were recently released by the Metro-Dade Planning Department in March of 1995. The revised estimate of 2.8 million residents in Dade County by the year 2015 is approximately 330,000 higher than the estimates contained in the financial resources plan and could have a significant impact on revenue projections as well as resource needs.

While the 1995 TIP is financially constrained, this is not clearly presented in the financial tables in the TIP. The 1995 TIP categorizes all transportation improvements and identifies priorities which establish multi-year fiscal programming. The 1995 TIP identifies all sources of funding which are known or are anticipated to be available during the program period. Operating and maintenance costs are reflected in the current TIP and, according to MPO and FDOT officials, these costs account for approximately 17% of highway funds and 80% of transit funds. Operating and maintenance costs projected for the existing highway and transit systems are based on historic costs.

In many regions, FHWA Surface Transportation Program (STP) and FTA Section 9 funds are the most commonly used sources of flexible funding between highway and transit modes. In the Miami area, STP funds are partially used to fund highway maintenance in accordance with FDOT's Work Program Instructions which require resurfacing targets in all areas with a population over 200,000 to be met with XU (Surface Transportation, Areas >200,000) and XA (Surface Transportation, Any Areas) funds. However, XU funds are also being "flexed" for transit projects such as the Metrorail Extension to Palmetto. Furthermore, according to FDOT staff, a minimum of the 14.3% of the State Transportation Trust Fund is allocated to transit use. Conversely, FTA funds have been "flexed" in part to fund park and ride lot expansions and improvements at locations throughout the Metrorail system.

The Metro-Dade MPO is currently addressing a number of issues that will affect how future transportation improvements are financed. There is a debate between members of the MPO and participating agencies regarding whether to include FTA Section 3 discretionary funding in the LRTP update and the TIP and, if so, what constitutes a "reasonable" estimate of those revenues.³⁴

The potential impact of FDOT's East-West and MIC studies has also raised concerns regarding financial constraint in the LRTP and the TIP. According to MPO staff, inclusion of elements of both projects upon reaching the design, engineering, and construction phases will be on a minimum operable approach, funding segment by segment as resources are identified.

The MPO is also looking towards the formation of a Dade County Expressway Authority as a means to raise future revenues. Enabling legislation to create the Authority was passed by the state legislature in 1994. The Authority would have the power to levy tolls and use the proceeds for transit or highway improvements, including transit operating expenses. Efforts to ensure ongoing integration of financial constraint into the planning process are also reflected in a preview of the 1996 UPWP. A new task under Objective B: Short-Range Transportation System Planning and Management addresses Transportation Program Financial Analyses and Assessments. The task calls for preparation of critical assessments of available and future resources to meet the LRTP's program funding requirements. The iterative process of integrating the development of FDOT's Five-Year Work Program and the Metro-Dade TIP cited earlier in Section III.B also enhances financial constraint.

Observations and Recommendations

1. Financial Resources Plan: With the multitude of projects and multimodal proposals under consideration, disciplined and rigorous financial planning is vital to the successful realization of the Metro-Dade transportation program. The MPO, State and transit operator should continue to place a high priority on the development and update of financial plans which reflect fiscal constraint and alternative revenue strategies.
2. Transit/Port/Airport Financial Elements: A complete regional transportation financial plan will require the inclusion of transit investments which are contemplated over the long-term as well as operating and maintenance costs for the short and long-term. Furthermore, as appropriate, financial elements of the Port and Airport financial plans should be referenced where they are relevant to the surface transportation system.
3. Fiscal Constraint: While the 1995 TIP is financially constrained, future revised TIPs would be more effective documents if they contain additional tables showing total revenue sources by source compared to total expenditures by expenditure category to clearly illustrate the TIP's financial constraint.
4. Operation and Maintenance Costs: Operating and maintenance costs of the existing transportation system should be clearly identified in both the LRTP and TIP documents to ensure a complete picture of system expenditures.
5. Flexible Funding: The allocation of funds to transportation improvements should be based on the outcome of the planning process, the evaluation of investment options, and the priorities established thereby. Federal requirements provide flexibility to MPOs, states and transit operators to allow multimodal investments to be made with federal funds, in

accordance with the priorities and long-term objectives of the metropolitan regions, in cooperation with the states.

6. **Discretionary Funds:** The financial plan for the updated 2015 LRTP and 1996 TIP should address all sources of funding, including FTA Section 3 Discretionary Funds, using reasonable assumptions based on historical trends.

B. Major Investment Studies

In many areas, MPOs have developed an approach to coordination of MIS which clearly describes how an MIS corridor or the need for an MIS would be identified, the process for initiating an MIS, the process for determining the lead agency on a given project, and the roles and responsibilities of each agency in the MIS process. While there are currently a number of MIS under way in the Miami metropolitan region, the Metro-Dade MPO does not have a published policy regarding its approach to MIS and it is unclear what the MPO's role has been in identifying and initiating the MIS discussed below.

FDOT's East-West Corridor and MIC studies were started under the existing National Environmental Policy Act (NEPA) process before transitioning to the MIS process. The process began with the development of a Memorandum of Understanding (MOU) between all participating federal, state, and local agencies which detailed the coordination of the roles and responsibilities of all involved. Both studies have followed parallel steps which have included defining the project design objectives, establishing evaluation criteria, analyzing alternatives using the evaluation criteria, examining site alternatives, and mounting an extensive public outreach effort. FDOT has scheduled release of a Draft Environmental Impact Statement (DEIS) for circulation in August 1995. According to FDOT staff, one of ISTEA's greatest impacts has been the availability of CMAQ funds, which have been used in part to fund the MISs.

The Metro-Dade MPO is also involved in a number of other studies that might be considered MIS but are not specifically referred to as such. The Biscayne Boulevard/US 1 Transportation Enhancements project described in the 1995 UPWP is essentially a corridor study which considers all modes, access and land use issues, mobility issues for various groups and aesthetic improvements. The study involves the MPO, Metro Dade Public Works, FDOT, MDTA, and the City of Miami. MDTA is also the lead agency in the North Corridor Study, which examines alternatives for transportation improvements along the North Corridor, identified as a priority corridor in the 2010 LRTP.

The Center for Urban Transportation Research (CUTR) at the University of South Florida, under contract to the MPO, has prepared a Transit Corridor Investment Study which assesses the status of all existing transit corridor investments based on a review of the LRTP, the Dade County Transit Corridors Transitional Analysis, the Transit Corridor Implementation Status Report, and the MDTA's Program of Interrelated Projects. While these studies contain elements of an MIS including alternatives analysis and public involvement, they do not appear to be an MIS which would require specific elements in the conducting of the study. Future MIS could include a proposed tunnel linking the Port of Miami with the interstate highway system to improve access.³⁶

Observations and Recommendations

1. MIS Process: Effective implementation of the MIS process in the Miami metropolitan area will depend on an adopted process which clearly identifies how the need for an MIS is determined and how an MIS will be administered.

C. CMS and Other ISTEA Management Systems

In Dade County, the Metro-Dade MPO has taken the lead in developing a Congestion Management System (CMS) for the Miami metropolitan area, while FDOT's District 6 office is serving as the lead agency in the development of the other management systems discussed in ISTEA. A statewide task team drafted guidelines for the development of a local CMS and changed the name from CMS to the Mobility Management Process (MMP) to better reflect the intent of ISTEA. The Dade County CMS Steering Committee adopted this change and therefore the process under development is referred to as the Dade County MMP (DCMMP).

As a Transportation Management Area (TMA - defined as an urban area with a population greater than 200,000) and an ozone maintenance area, federal regulations also require Miami to demonstrate full operation and use of the CMS in transportation management by October 1, 1997. At present, the MPO has adopted an interim CMS. In cooperation with the FDOT, a workplan identifying CMS activities and responsibilities was developed and submitted in late October of 1994. The MPO submitted an Interim CMS for Metro-Dade County on December 18, 1994. In the Interim CMS, the MPO identified adopted performance definitions for each mode. Highway congestion will be based on the LOS standards adopted in the Dade County's CDMP, while transit performance will be analyzed using measures of load factor, travel time, and travel speed. Bicycle and pedestrian options will be analyzed based on the availability of those facilities in congested corridors.

The MPO plans to use the network and travel demand model developed under the Florida State Urban Transportation Model Structure (FSUTMS) as the primary source of congestion evaluation and assessment of problem corridors. The Interim-CMS provides summaries of strategies being considered which include:

- Traffic Demand Management
- High Occupancy Vehicle Lanes
- Transit Operations Improvements
- Congestion Pricing
- Incident Management
- General Use Lanes
- Traffic Operations Improvements
- Enhanced Transit
- Bike/Pedestrian modes
- Access Management
- Intelligent Corridor Systems

Preliminary work leading to the development of the Interim CMS included a Demand Management and Congestion Mitigation Study, the Dade County Road Pricing Study and the Public Private Partnerships Study. The MPO has also published reports examining bicycle and pedestrian mobility as part of CMS development and are exploring the establishment of additional transportation management associations, two of which currently exist in the Miami area. 37

According to FDOT officials, many of the management systems described in ISTEAs have been in place locally and statewide in one form or another for many years, and the data from those systems have been used as inputs to the planning process to identify needs and priorities. FDOT District 6 staff are developing a prototype Integrated Management System with the goal of fully integrating information from the CMS, the Public Transportation Management System (PTMS), the Intermodal Management System (IMS), and the Traffic Monitoring System for Highways (TMS/H). FDOT began by identifying partners in the planning process and potential users of the information generated from the system. A non-binding MOU was developed summarizing the roles and responsibilities of each agency involved. A survey was then developed to solicit input from all partners regarding planning process data requirements, availability of data, and desired outputs and report formats.

The Integrated Management System approach would be developed to avoid duplication of activities across multiple management systems so that each system will focus on specific elements. For example, the performance of roadway and transit links would be incorporated into the CMS and feed that information into, and take information from, the other systems. The focal point of the prototype system will be a centralized Decision Support System (DSS), which will be an integrated relational database connected to a Geographic Information System (GIS). The DSS will be used predominantly to display information in graphic and report format to be incorporated into the transportation planning process.

The 2010 LRTP and 1995 TIP refer to existing Transportation Systems Management (TSM) activities aimed at the efficient management of the transportation network. The TSM activities primarily include short-term strategies that address congestion problems through such means as consideration of contra-flow traffic designs, study of parking policies, ramp metering, improved signal timing, and the establishment of exclusive right-of-way for high occupancy and public transportation vehicles. Dade County's contract with the University of South Florida's CUTR is also addressing diverse elements of system management through specific studies conducted in cooperation with the Metro-Dade MPO and MDTA. Furthermore, in the TIP and the LRTP specific funding is designated for system enhancements and efficiency.

Observations and Recommendations

1. Management Systems Integration: Initial efforts to integrate ISTEAs management systems and to fully incorporate systems outputs into the local area planning process appear innovative and merit further support. Development and use of integrated data that result from this effort will significantly aid the transportation planning process.

D. Air Quality and Conformity

The Miami area, as part of the Miami-Ft. Lauderdale-West Palm Beach Ozone Moderate non-attainment area, was redesignated to maintenance status by the United States Environmental Protection Agency (USEPA) effective April 24, 1995. As part of the maintenance area, Miami will be required to continue to demonstrate conformity of both the TIP and the LRTP with the State Implementation Plan (SIP) for air quality for the next twenty years. The Metro-Dade MPO serves as the designated air quality organization for the determination of conformity for Dade

County. To meet the conformity criteria, individual projects and the programs contained in the TIP and the LRTP must conform with the approved emissions budgets forecast in the SIP.

To establish conformity, the Metro-Dade MPO followed FDOT's Directive No.525-010-014-c "District Review of Conformity Determinations by Metropolitan Planning Organizations in Nonattainment and Maintenance Areas" released in February of 1994. The Directive addresses the transportation and air quality planning methodology to be employed by the State's urban areas using the FSUTMS and the USEPA's MOBILE emissions series models to assess the status of air quality compliance efforts. The MPO has designated \$80,000 in funding (\$35,000 from FTA Section 8 and \$45,000 from FHWA-PL 112) under a separate task in the 1995 UPWP to support air quality conformity assessments. The MPO coordinates staff from the participating agencies including FDOT (District VI Office), the Dade County Department of Environmental Resources Management (DERM), and the MDTA, who are responsible for completing the required transportation and air quality technical analysis.

The conformity determination analysis is based upon emission results calculated using the FSUTMS based travel demand model to project VMT, the MOBILE 5a emissions model, and the EMIS emission interface. Highway and transit projects identified in the 2010 LRTP (as updated each November) and the 1995 TIP are used as data input into the models for LRTP and TIP conformity. Baseline and action networks for 1996, 2005 and 2010 were coded by FDOT District 6 Office staff and reviewed by the MPO staff, while the actual runs of the FSUTMS network were performed at the MPO Office. The conformity report is reviewed using the same process used with the LRTP, TIP, and UPWP, with the review proceeding through various MPO committees from the TPTAC, to the CTAC, the TPC, and, finally, the MPO Governing Board.

While ozone exceedances have decreased over the last several years in Dade County and the 2010 LRTP and the 1995 TIP meet the conformity requirement, the ability to meet projected emissions budgets in the "out" years was described by local environmental officials as "fragile." This is particularly significant given the projected demographic and VMT growth trends discussed earlier which could have an impact on Miami's conformity determination. Furthermore, due to the uncertain status of federal requirements for Inspection and Maintenance (I/M) programs and many states' resistance to implementing centralized programs, future air quality credits (claimed in the SIP) derived from the local Motor Vehicle Inspection Program (MVIP) implemented in 1991 may not materialize. Elimination or reduction of MVIP credits could have a significant impact on the area's ability to stay within their emissions projection budgets due to the fact that approximately 75% of emissions in Dade County are derived from mobile sources and 11% of reductions are credited to those sources (primarily through MVIP).

According to staff involved with the conformity review, conformity is currently being used as more of an "after-the-fact" test applied to the system after the projects have been selected, rather than part of the project selection process. With the recent redesignation of the area to maintenance status, federal Congestion Management Air Quality Improvement Program (CMAQ) funds for transportation projects with beneficial air quality impacts have decreased from approximately \$18 million to \$3 million per year. According to MPO staff, this reduction in funds brought air quality issues to the forefront and made air quality a priority despite the loss of CMAQ funds. At the time of the EPR, details regarding how air quality concerns would be

addressed on a project-by-project basis in the project selection process were not developed or available. However, local programs including the MDTA's clean buses program and the airport's taxi side inspection program are moving forward with the anticipation of air quality benefits to the area.

In an effort to enhance air quality conformity efforts, the Metro-Dade MPO's 1995 TIP included voluntary Transportation Control Measure (TCM) strategies, which are expected to contribute to emissions reductions, despite the fact that TCMs are not required in the Florida SIP. The TCMs are intended to reduce Single Occupant Vehicles (SOV), reduce traffic congestion, increase transit usage, and promote the use of High Occupancy Vehicles (HOV). The TCMs cited from the TIP generally are in two categories: Park and ride lot expansion to discourage SOV and promotion of transit management associations to encourage ridesharing. Other documents reviewed referred to the MPO's consideration of other TCMs including Employee Commute Option (ECO) programs, CBD parking ordinances, and congestion pricing. However, these TCMs were not discussed in any of the planning documents.

On a regional level, the Metro-Dade MPO has coordinated its air quality improvement activities with the Broward and Palm Beach MPOs, which represent the other counties within the ozone maintenance area, through the Inter-MPO Air Quality Technical Committee. The committee is made up of representatives from the MPOs, County Offices of Environmental Management, County Transit Agencies, and FDOT District Planning Offices. This group meets at least four times per year to discuss on-going work related to air quality.

Observations and Recommendations

1. **Air Quality Criteria:** Consideration of air quality emissions impacts of specific projects should be an integral part of the TIP development process to ensure development of a conforming TIP.
2. **Conformity Status:** The MPO's planning process should address the possible impact of the following items on Miami's maintenance status:
 - Demographic trends identified in the LRTP
 - Monitoring emissions budgets for compliance with maintenance area requirements
 - Continuing public education efforts on the impact of transportation investment decisions and individual transportation choices on the area's air quality and maintenance status
 - Future changes to the SIP such as modified enhanced I/M.

E. Public Involvement Process

The ISTEA legislation and federal regulations require a "proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public." Metro-Dade MPO revised and adopted the Dade County Public Involvement Process (DCPIP) in February of 1995, after providing for a 45-day public comment period, to ensure compliance with Federal requirements for public involvement in the transportation planning process called for in ISTEA and the CAAA.

In the DCPIP, the MPO identifies and establishes roles for three key constituencies upon which the success of the public involvement process depends:

- *General Public:* Members of this group shall be able to participate in the meetings, learn about the process, identify the needs of the community at large, evaluate projects and propose alternative solutions.
- *Agencies:* Agencies work with the public providing access to general information, provide time for public response, prepare documentation for public distribution which is both concise and easy to understand, and keep the public informed about the transportation plans and programs that require public participation.
- *Decision Making Officials:* Officials assure that the public involvement process is established according to Federal requirements and the needs of the community, assure enough resources to implement the program, provide time for public comments, consider the public responses to and concerns with the plans and programs presented to the community, and evaluate the impacts of such comments.

The MPO currently uses the 32 member Citizens' Transportation Advisory Committee (CTAC) as the primary mechanism to solicit public participation from the general public. The CTAC consists of 32 MPO Board appointed members plus two FDOT appointed members and a representative of the MPO. CTAC members are drawn from both the general public and civic organizations and provide citizens with the opportunity to become involved in the transportation planning process. CTAC also established subcommittees on transit, surface, and the disabled to focus more closely on specific concerns.

To ensure public access, CTAC is involved at the early stages of development and evaluation of the LRTP, TIP, UPWP, and other planning documents before they advance through the various committees and eventually to the MPO Governing Board. The Chairperson or designee of CTAC is also a member of the various technical steering committees established for each work element within the UPWP and, as such, serves as a conduit for public concerns as plans move through the process toward ultimate MPO Board approval.

The MPO has also implemented other measures to enhance public involvement and to ensure public access to the planning process. These measures include: a 5-10 minute public comment session scheduled at the end of each CTAC, TPTAC, TPC, and MPO meeting; a policy ensuring physical accessibility to all locations where public involvement activities take place including availability of parking, public transit accessibility, accessibility for the elderly, and accessibility for persons with disabilities in compliance with Americans with Disabilities Act (ADA) requirements; provision for visual and hearing impaired aids; provision for Spanish language translation and Spanish advertisement for public meetings; distribution of documentation to city, county, and state officials for their information and comments; and televising of MPO Governing Board meetings on local access channels. Future plans also call for copies of the minutes from these meetings to be submitted to the Broward and West Palm Beach county MPOs for information and comment to enhance regional participation. When significant written and oral

comments are received as a result of the public involvement process, a summary or analysis of comments is included in the documents under consideration. If substantial changes in the document result from the comments received, a second opportunity will be provided for the public to comment on the revised document.

Metro-Dade MPO has also adopted a number of techniques they describe as "proactive" to further encourage public participation. The MPO has proposed employing multiple methods and strategies according to the individual characteristics of each plan or project. These strategies include:

- Maintaining a public involvement resource bank containing names and addresses and particular interests to identify those organizations/individuals who are willing to participate in the process. They are then contacted and assigned to particular task groups as appropriate.
- Placing ads in local newspapers asking for those organizations/individuals interested in participating in the process. Letters are also mailed to the Chamber of Commerce to promote community and business participation.
- Developing an educational and public awareness program to provide general knowledge of transportation terminology and planning procedures to the public.
- Using a number of techniques and strategies in combination according to resources available and the priority established for each plan such as:
 - Advisory committees
 - Transportation newsletters
 - Community meetings
 - Press conferences
 - Formation of adhoc TPTAC and TPC subcommittees
 - Citizen workshops
 - Newspaper ads
 - Mail surveys
 - Public meetings

The MPO adopted a process to monitor its own mailings, public resource bank, public involvement and attendance to continually review and assess its success in meeting public involvement goals. According to MPO staff, if monitoring reveals deficiencies in the public involvement process, the process will be evaluated and revised accordingly.

Other agencies, including the MDTA, airport and port also provide for public involvement through various community outreach meetings which target customers, local business, and transit disadvantaged populations. As an example, the MDTA advertises public meetings to solicit input on all large projects. It also establishes local citizens advisory committees and holds meetings in neighborhoods affected by the plans. As discussed in greater detail under Section VI.A, FDOT's public involvement efforts as part of the East-West and MIC studies have been extensive and public input has had direct impacts. According to FDOT staff, there have been changes to preferred alternatives as a result of public input. FDOT's efforts have also included exceeding

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requirements such as the 500-foot proximity notification to include the general areas that will be impacted by projects even if they are beyond this limit.

Observations and Recommendations

1. Public Involvement. Opportunities for public involvement at many stages in the transportation planning process, including the update to the LRTP, through the CTAC and other public forums appear to be effective and should be continued. The public involvement efforts also under way regarding the East-West Corridor and MIC studies have also been impressive and could be extended to other planning efforts in the area.
2. Community Outreach: The MPO should continue to examine outreach efforts of the transit agency to the public, the port to cargo representatives and the cruise industry, and the airport to both passenger and freight interests, for examples of successful and proactive public communication techniques. The MPO could incorporate these practices, as appropriate, in an effort to continually provide expanded opportunities for public input into the transportation planning processes.
3. Audio/Visual Aids: The MPO should specifically cite the existing availability of hearing and vision-impaired aid, as well as the televised broadcast of MPO policy meetings in their adopted DCPIP document.

F. ISTEA Fifteen Factors

ISTEA requires that the fifteen planning factors be explicitly considered and reflected in the products of the planning process. The Metro-Dade MPO submitted an interim update of the 2015 LRTP on December 18, 1994, for review and approval by federal agencies. The submittal included a self-assessment of whether or not the MPO's major planning documents adequately considered the ISTEA fifteen factors. The update suggested that the MPO is specifically addressing the fifteen factors in its UPWP, LRTP, and TIP as well as considering them in the development of the Dade County Mobility Management Plan (DCMMP) discussed earlier.

In many instances, the Metro-Dade planning process appears to have integrated elements of the fifteen factors such as land use coordination, system maintenance, environmental impacts and congestion mitigation before ISTEA specifically required their consideration. However, from a review of planning documents and discussions with MPO staff during the site visit, the MPO's approach to some of the fifteen factors appears to be more in the manner of an "after-the-fact" checklist to ensure compliance with planning regulations rather than an integrated part of their planning process. MPO staff members suggested that they are transitioning from implicit to more explicit consideration of the fifteen factors in their updated planning documents.

As discussed earlier, in March 1994 the MPO Governing Board adopted revised objectives for the LRTP 2015 update, which explicitly reflect the fifteen factors. MPO staff cited these new objectives and the concurrent development of new project prioritization criteria based on those objectives as an indication of progress towards integrating the fifteen factors into the planning⁴³

process. The new project selection criteria under development were not available for review at the time of this EPR and, as cited earlier, it is unclear how the criteria are being developed and at what point in the project development and selection process they will be applied.

In certain areas, such as land use coordination and the promotion of greater transit usage, policies have been and are being put in place which reflect the fifteen factors. Consideration of the impact of transportation planning on land use is highlighted in a number of ways. The County requires that projects contained in the LRTP and TIP be included in the County's Comprehensive Development Master Plan (CDMP) and be consistent with level-of-service standards specified in the CDMP. The CDMP is a requirement of the State of Florida under its land use legislation referred to as the concurrency requirements. Exclusion of a project or facility from the CDMP could prevent Dade County's participation in the project even if it is included in the LRTP.

Dade County also recently received approval to have the urban infill area (east of SW/NW 77 Avenue) designated as a Transportation Concurrency Exception Area from the State's concurrency requirements. The process of developing the application required state, county, local jurisdictions and transportation agencies to examine the link between further development and its impact on the transportation infrastructure. The application for exception acknowledges that roadways within the urban infill area are already at capacity, and therefore further development could have an effect on both transit ridership and congestion. While the ultimate impact of approval of the application on the transportation system and transit ridership is not clear, the application process in itself represents an effort on the part of local agencies to incorporate land use impacts in their transportation planning decisions.

In terms of encouraging transit ridership, FDOT officials point to their agency's enactment of the Intrastate Highway System Policies and Priorities legislation, which is a policy limiting the number of general use lanes on Florida's highway system to six lanes. The LOS standards contained in the CDMP also reflect the incorporation of a transit element whereby LOS standards are allowed to exceed capacity where transit is available. Local parking policies and their impact on transportation mode choice on a countywide basis is also the subject of a current parking study being undertaken by the MPO. Staff expressed frustration at their lack of ability to limit the size and availability of parking places, which is often dictated by local jurisdictional land use policies. These local policies often include the establishment of parking space "floors" (minimum space allowances) instead of "ceilings" (maximum space allowances) which might encourage less parking availability and greater transit use. However, in order to fund development, local financial institutions often require these "floors" to ensure plentiful parking.

Finally, freight considerations are also beginning to be more fully integrated into the planning process. In addition to providing input to FDOT's East-West and MIC study, the MPO is also currently undertaking a comprehensive freight movement study for Dade County. The study will include local transportation agencies, the MPO, and local trucking and freight representatives with the goal of developing a freight movement plan and a freight component to the local transportation modeling efforts.

Observations and Recommendations

1. General: The MPO's comprehensive consideration of the ISTEA Fifteen Factors in the planning process would strengthen the planning process and the LRTP.
2. Land Use: Formal linkages between land use and transportation planning, encouraged by ISTEA, are difficult to accomplish in most areas. Coordination and consistency between the County's CDMP and products of the MPO planning process and FDOT's restriction on expansion of highway capacity provide a strong foundation for working toward this challenging but vital linkage. Furthermore, the County's application to be designated an exception area to the State's concurrency requirements represents a clear recognition of the link between development, the transportation system, and local land use patterns.
3. Land Use/Transit Use: Addressing the impacts of local land use, parking availability, and pricing policies on mode choice and, in particular, on transit ridership would greatly assist the planning process. The MPO could explore possibilities for revising local land use plans and the CDMP to establish parking place "maximum" rather than "minimum" limits in the development process, particularly in areas well served by transit. Other incentives to shift mode choice could also be incorporated in the MPO's project identification criteria and processes.

VI. Integration of Strategic Transportation Planning

A major thrust of ISTEA is support for the integration of strategic planning between multiple transportation modes in metropolitan areas. In the Miami metropolitan area, issues of increasing congestion and limits on future highway expansion combined with explosive growth predictions for population, tourism, and trade have brought the consideration of multi-modal alternatives to the forefront of local transportation planning issues. In particular, Miami's integration of strategic transportation planning is exemplified by its multi-modal approach to two major projects currently under way and the integration of transit as a full partner in the metropolitan planning process.

A. Multi-Modalism

Multi-modalism was identified by the federal team and the Metro-Dade MPO as a primary issue for discussion during the site visit and resulted in a half-day session at the Port of Miami attended by representatives from the MPO, FDOT, MDTA, the port, the Greater Miami Chamber of Commerce, bicycle and pedestrian interests, and representatives of the cruise and freight industry. Miami's efforts to develop multi-modal solutions to current and emerging transportation problems are noteworthy and may provide other metropolitan areas with ideas and insights on multi-modal planning.

FDOT's East-West Corridor and MIC studies illustrate three elements of Miami's local process which demonstrate the feasibility of multi-modal planning in a large, complex metropolitan region. These elements are:

- The interagency consultation process
- An extensive public participation process
- Supporting studies and legislation which promote multi-modal alternatives and solutions

Both of these studies are classified as MISs and examine multi-modal alternatives and multi-modal connectivity throughout the metropolitan area. The East-West Corridor study explores the feasibility of a rail system adjacent to State Route 836 (which runs east-west) connecting Florida International University (FIU), the airport via the proposed MIC, downtown Miami, Miami Beach, and the seaport along with enhancements to the existing highway facilities. The MIC study examines an envisioned "Grand Central Station" transportation complex east of the airport. The MIC would provide connecting links to Metrorail, Tri-Rail, Amtrak, High Speed Rail, the regional highway system, the Port of Miami, and a people mover to Miami International Airport (MIA).

The interagency consultation and participation on these projects reflects the cooperation called for in ISTEA. An intensive effort has been put in place to coordinate and consult with agencies at the federal, state and local level on multi-modal planning efforts related to East-West Corridor and MIC projects. To ensure Federal agency coordination on the MIS and during the National Environmental Protection Act (NEPA) process, FDOT, as the lead agency on the MIS for these projects, negotiated a MOU in 1993 with the agencies of the US DOT including:

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- Federal Highway Administration (FHWA)
- Federal Railroad Administration (FRA)
- Maritime Administration (MARAD)
- Federal Transit Administration (FTA)
- Federal Aviation Administration (FAA)
- United States Coast Guard (USCG)

This level of coordination among the Federal agencies from an early stage in the planning process, including the identification and analysis of alternatives, is a good start to ensuring coordination on these multi-modal projects at the federal level.

Within the State of Florida, FDOT identified agencies through outreach and by providing formal notification to all potentially interested state agencies which included:

- Department of Commerce
- Department of Natural Resources
- South Florida Water Management District
- Department of State-Division of Historical Resources
- Department of Environmental Protection
- Game and Fresh Water Fish Commission
- Office of the Governor

Coordination between local agencies is equally comprehensive with the following agencies included in the consultation and coordination process:

- Metro-Dade MPO
- Metro-Dade Transit Agency
- City of Miami Departments of:
 - City Planning
 - Public Works
 - City Manager
- City of Miami Departments of:
 - Planning
 - Parks and Recreation
 - Public Works
 - Transportation Planning
 - Fire and Rescue
- City of Hialeah Departments of :
 - Parks & Recreation
 - Fire Department
 - City Clerk
 - Water & Sewer
- Metro-Dade County Departments of :
 - Department of Environmental Resources
 - Historic Preservation
 - Water and Sewer Authority
 - Office of Emergency Management
 - Aviation
 - Fire and Rescue
 - Parks and Recreation
 - Planning

In addition to the extensive outreach to public agencies to coordinate and consult with the FDOT on these projects, three committees were established early in the process to provide opportunities to identify and resolve issues. The committees, which include representatives of the federal, state, and local agencies listed above, are the Technical Steering Committee, the Policy Steering Committee, and the Focused Working Committee. The Technical and Steering Committees provide ongoing input to the study on key issues and concerns. The Focused Working Committee concentrates on specific technical issues related to the projects and various alternatives.

Private sector representatives from the cruise, freight, car rental, and other industries, as well as local chambers of commerce, are also represented. The close cooperation between business and government in the planning stages has provided opportunities for innovative approaches⁴⁷

private/public partnerships in funding these projects. As an example, the Public Lands Trust, which is a private/public partnership, is exploring ways to purchase outright the proposed right-of-way for the MIC site. Proposed financing for the MIC also includes examining opportunities to maximize commercial/retail space within the MIC based on the current success of retail operations at MIA and working with car rental companies to plan for space capacity requirements at the MIC.

Public outreach regarding the East-West Corridor and MIC studies has been extensive. The purpose of the public involvement program is to establish and maintain communication with the public, individuals, and agencies concerned with the projects, and discuss potential impacts of the projects to build consensus for implementation. The public participation process for these projects began early during the concept development stage and has elicited input from a variety of customers of the transportation system including the public, rental car operators at the airport, citizens groups, passenger and freight service providers, and businesses. FDOT established a promotional/public information office to provide public access and information to all interested parties. These efforts have been combined with other public involvement efforts described in Section V.E of this report.

As of March 1995, FDOT's public outreach effort has resulted in approximately 835 meetings with the public. Components of the public participation process for the East-West and MIC projects include:

- Information dissemination early in the project for both the public and businesses.
- Formal and informal opportunities for input by citizens, businesses, and other constituencies.
- Presentations on project concepts and alternatives.
- Community participation opportunities.
- A conveniently located project office.

Each component of the public participation process has clear objectives, target audiences, collateral materials, and dedicated staff. The program is designed to assist FDOT in making informed decisions and to promote active and continuous participation. The MPO staff and FDOT acknowledge that public participation has enhanced the review of alternatives and has already resulted in real impacts on the planning process through incorporation of public concerns which resulted in the re-alignment of preliminary design project alternatives on the projects. The MPO and FDOT believe that the benefits of such extensive involvement will lead to better project selection and decision making on the ultimate size, scope, and locations under study.

Another notable element of the multi-modal planning process in the Metro-Dade area is the effort of the MPO, in coordination with other agencies, to undertake supporting studies to fully understand the scope of multi-modal transportation issues in the region, to analyze future trends and their impacts on all elements of the transportation system, and to support enactment of legislation which will promote multi-modal alternatives. These efforts are reflected in many of the projects and tasks contained in the UPWP and the TIP and specific studies under way or planned. These following studies are being conducted by the agencies indicated in parentheses:⁴⁸

- Airport Area Multi-modal Access Study (MIA)
- Dade County Transit Corridors Evaluation Study (MDTA)
- Freight Movement Study for Dade County (Metro-Dade MPO)
- Congestion Mitigation-Public Private Partnership Study (Metro-Dade MPO)
- Transit Corridor Investment Study (Metro-Dade MPO)
- County Wide Parking Policy Study (Metro-Dade MPO)
- CSXT Rights of Way: Rails to Trails Study (Metro-Dade MPO)
- Comprehensive Bicycle/Pedestrian Planning Programs (Metro-Dade MPO)
- Rail/Truck Movement Study (Port of Miami)
- Study of Seaport Design Issues (Port of Miami)

At the MPO level, as part of the task to update the 2015 LRTP described in the current UPWP, new capacity standards will be developed to enable alternate combinations of modes to be used to meet projected travel demands in a corridor. The UPWP also provides for short-range multi-modal planning activities to reduce congestion in the County, especially through short-term, low capital congestion relief measures, including transit, pedestrian and bicycle options. In addition, the MPO staff hopes to integrate the relevant components of MIA's Airport Master Plan and the Port of Miami's expansion plan into the 2015 LRTP update.

On a county-wide level, a multi-modal approach to transportation planning and land use coordination is reflected by Dade County's adoption of new capacity and LOS standards in their CDMF which take into account transit availability. FDOT's enactment of the Intrastate Highway System Policies and Priorities legislation, cited earlier, will also have the effect of promoting non-highway alternatives as local highways reach their size limitations.

Observations and Recommendations

1. **Multi-modalism:** The East-West Corridor and MIC studies demonstrate broad inclusion of local transportation agencies, private industries, and the public. Efforts at public outreach and the incorporation of public feedback into the planning process are also aggressive. These projects could provide a model for many aspects of multi-modal planning, private/public sector coordination, and public involvement.
2. **Linkage/Financial Constraint:** The multimodal studies currently under way should be reflected in the 2015 LRTP update. Implementation of these improvements should be consistent with the financial plan developed to support the 2015 LRTP and TIP.
3. **Public/Private Partnerships:** The involvement of federal, state, and local transportation agencies and representatives of the cruise, freight, and car rental industries in FDOT's MIC and East-West projects provides a unique opportunity to explore the potential of public/private partnerships in major transportation projects. Given the pivotal role that the seaport and airport play in the current and future economic vitality of the Greater Miami metropolitan area, coupled with the need for extensive investment to retain their respective shares of passenger and freight markets, regional success will depend on collaborative and innovative financing mechanisms involving private and public sector partnerships.

B. Transit

The Metro-Dade Transit Agency (MDTA) is responsible for operation of all public mass transit in the Miami metropolitan area. In 1986, the MDTA was established to provide transit services in Dade County. MDTA is the largest transit provider in the State of Florida with services including the Metrorail (rapid transit which connects with the Tri-Rail), Metromover (automated guideway people mover), Metrobus, and paratransit services.

As a County agency, the MDTA is represented in the MPO planning process by the County Commissioners, who serve on the MPO Governing Board. Furthermore, as full voting members of the Transportation Planning Council (TPC), the LRTP Steering Committee, and various subcommittees, the MDTA is an active partner in the local transportation planning process. According to discussions with MDTA staff and management during the site visit, the agency is a full partner in the planning process and works closely with the MPO, FDOT, and other participating agencies to integrate transit interests and solutions.

MDTA also works in cooperation with the Tri-Rail, which operates a heavy rail system connecting Palm Beach, Broward, and Dade Counties and which serves as a feeder to the MDTA Metrorail. Tri-Rail attends MPO meetings in Dade, Broward, and Palm Beach Counties to coordinate their activities. It provides all three MPOs with capital project priority lists on an annual basis and administers planning activities in accordance with federal, state and local requirements. Tri-Rail is also a voting member of the Metro-Dade MPO's TPC and LRTP Steering Committee, which allows formal consideration of their plans and programs within the MPO planning process and close integration with MDTA plans and programs. The 1995 UPWP includes a separate task which describes Tri-Rail coordination activities and is funded at \$675,000 with FTA Section 9 funds.

The MDTA's transit component of the 2010 LRTP identified improvements for all six corridor analysis areas which, if implemented, would represent a major expansion of the existing system. This expansion would include the following elements:

- 4.5 million additional bus service miles over the first three years and 150-200 thousand additional bus service miles thereafter.
- Two extensions of Metromover.
- Two smaller scale extensions to Metrorail.
- A commuter rail extension of Tri-Rail.

The implementation of those elements is projected to have the following impacts:

- Over 800,000 daily boardings.
- An increase in transit's share of urban travel from 5% to 11%.
- A bus fleet of 800 to 1,200 vehicles.
- A rail fleet of 300 to 340 vehicles.
- A Tri-Rail extension to the MIA.

As cited earlier, there were no available resources to fund the transit elements in the 2010 LRTP with the exception of previously earmarked funds for the extension of the Metromover system. While the 2010 LRTP pre-dates ISTEA's requirement for fiscal constraint, MPO documents developed since the passage of ISTEA appear to incorporate fiscal constraint. The transit element of the 1995 TIP appears to be fiscally constrained with funding sources for each project identified including federal, state, and local funds. The 1995 TIP identifies funds for system maintenance, Metrorail expansion to Palmetto, park and ride lots, improved transit access, transit safety enhancement, bus replacement, ADA compliance projects, facility renovations and enhanced passenger facilities, and an upgrade of the Central Control System for Metrorail and Metromover. The Metromover extensions are near completion and two of the six transit corridors, North and East-West (as part of FDOT's East-West Corridor study), have been selected and are moving forward with an alternatives analysis and right-of-way acquisition. Tri-Rail's extension of its southern terminus to a new station east of MIA at the proposed MIC location is also currently under way. According to MPO staff, the 2015 LRTP will include the unfunded transit improvements identified in the 2010 LRTP but will be listed under the needs component of the plan.

An update to the 1991 MDTA Strategic Management Plan (SMP) is currently being developed with assistance from the Center for Urban Transportation Research (CUTR) at the University of South Florida. The update will be fully integrated into the 2015 LRTP according to MPO and MDTA staff and will include a financially constrained transit plan. Revenue projections developed by the MDTA as part of their Transit Development Program 1994 are already being incorporated as a vital component in the Financial Resources Plan developed for the 2105 LRTP update. As cited earlier, these projections include increased farebox revenues based on a projected increase in the proportion of the transit share of the traveling population of 0.5% annually, assuming no change in service scheduling or area served. This would represent an increase in passenger boardings of 72% over current boardings by the year 2015.

The ability to implement plans for transit system expansion are critically linked to dependable sources of local revenues. According to MDTA staff, of the approximately \$200 million annual MDTA budget, \$13 million is derived from the County, \$7 million from USDOT operating subsidies, \$80 million from farebox revenues, and the remainder from local taxpayer support from the County general fund. A draft Appendix B: MDTA Situation Audit to MDTA's SMP update identifies opportunities and threats to the successful implementation of transit plans. Among the threats identified is the overturn of the local option gas tax which is currently programmed to provide a substantial portion of the local capital match for many MDTA projects. Furthermore, local funding sources for transit are critical to maintaining the State Block Grant funding, which amounts to approximately \$13 million annually for MDTA operating assistance. Continuation of a county general fund subsidy is also identified as a concern given the apparent support of the County Commission to significantly reduce county taxes over the next three years. This cutback could translate into substantial reductions to the MDTA despite the likelihood of a significant increase in the demand for transit resulting from the projected influx of foreign immigrants by 2010, most of whom are likely to be transit dependent.

Illegal jitneys are also cited in the Appendix A: Evaluation of Performance-1991 SMP Objectives⁵¹

to MDTA's SMP update as potentially impacting established transit ridership in the metropolitan area. Jitneys are passenger vans that seat 20 persons or fewer and operate by picking up and discharging passengers, along major streets, for an established fee. Illegal jitneys are cited for declining ridership and revenue on certain major bus routes, where public transportation is generally most effective. However, increased enforcement by the County against illegal jitneys has had a positive effect on MDTA ridership along those routes.

As illustrated in the 1995 UPWP, integration of strategic planning for transit is on-going in the MPO planning process. The UPWP includes the following specific tasks relating to transit enhancement:

- Short-Range Transit Planning activities including continuing projects such as updating the transportation development program and transit networks;
- On-going transit reporting and forecasting, transit financial capacity assessments, and transit route-level monitoring projects;
- CUTR support project which provides the MDTA with technical assistance in the implementation of internal management and service delivery improvements through an inter-local agreement with the State of Florida's CUTR.
- Projects addressing FTA Civil Rights and ADA requirements, as well as a Transportation Disadvantaged Planning project which is required by state legislation.

Observations and Recommendations

1. Linkage to the LRTP: The Metro-Dade MPO should continue to incorporate the direction and priorities of the MDTA Strategic Plan update into the current work on the 2015 Plan update. Conversely, projects and priorities contained in the 2015 Plan update should be reflected in future MDTA Strategic Plan updates.

VII. Travel Demand Forecasting

The Metro-Dade MPO makes use of the Florida Standard Urban Transportation Model Structure (FSUTMS) to perform regional travel forecasting. FSUTMS has been approved by USEPA and FHWA for calculating VMT by speed, facility type, and geographic location. FSUTMS is designed to provide transportation tools for use in multi-modal urban systems planning using the latest population and employment figures. Concerns have previously been raised in Florida that various MPO models throughout the state varied significantly from the standards set by FDOT for application of the FSUTMS. In order to address that issue, FDOT formed the Statewide Model Task Force, which is a standing group comprised of state, regional and local government representatives as well as consultants with modeling expertise. The task force is responsible for addressing some of the current shortcomings in modeling procedures and for reviewing local innovations and recommending improvements to the FSUTMS model. The Metro-Dade MPO participates in the task force.

The Dade County Planning Department functions as the official comprehensive planning agency in performing MPO-related technical planning activities including responsibility for collection, development, and evaluation of land use and socio-economic data and forecasts for use in the travel demand models. As part of the LRTP 2015 update process, the Metro-Dade MPO travel demand model was recently updated with 1993 travel survey data and the 1990 Census information. However, prior to this update, the 1986 base year transportation network for the Dade County urbanized area, projected from 1980 Census data, was the latest validated network. According to Planning Department staff, the delay in updating model inputs was due, in part, to the impact of Hurricane Andrew on the staff of the department.

At present, modeling improvements in the Miami metropolitan area appear to be carried out on a project-by-project basis, and not centrally through a coordinating agency or the UPWP process. During discussions with the local staff involved in modelling efforts, a number of deficiencies with the MPO's current model were identified including: distribution of trips on a free flow versus restrained basis, cycling back for mode split but not for trip distribution, and 24-hour spreading of trips without peak times.

In November of 1994, the MPO, MDTA, FDOT, local modelling consultants, and nationally recognized modelling experts convened the Metro-Dade MPO Urban Area Travel Demand Model Peer Review to review the locally adapted FSUTMS model used to develop travel forecasts for FDOT's East-West Corridor study. The Peer Review members discussed a number of issues including: revisions required to update the basic FSUTMS multinomial mode choice model to the current state-of-the-practice nested logit structure, implications of the current procedures for developing peak period assignments from daily assignments, development of true period-based modeling capabilities, and improving trip distribution.

As part of the UPWP, the Metro-Dade MPO has established a specific task under the lead of the Dade County Planning Department for a transition from reliance on paper maps, PC spreadsheets, and PC database management programs to GIS technology for the development and maintenance of socio-economic data for transportation applications. The data will be manipulated in 53

ARC/INFO environment. During the first of a two-year effort, the Department plans to create several GIS database layers over block or folio geography which will be assigned to Transportation Analysis Zones (TAZs). One of the primary advantages cited for moving to GIS is that it is an ideal environment for flagging vacant parcels of land and subsequently updating their status to reflect the future state of each TAZ and to project future changes in travel patterns. In a joint effort with MDTA, the Planning Department has proposed a zonal-level analysis of parking fees for private and public facilities. This information is intended to further refine transportation modeling as an important determinant of transit demand.

Observations and Recommendations

1. **Model Updates:** Metro-Dade MPO and County Planning Department interests would be served by developing and adopting a formal schedule and process for on-going model updates and validation, including the timely updating of socio-economic and demographic data inputs to the model.
2. **Model Upgrades:** Credible modeling assumptions and outputs are critical to the planning process. The MPO should continue to upgrade its modeling capabilities in concert with the recommendations resulting from the recently completed peer review. Improvements recommended in the review include development of peak-hour trip assignments, the application of trip distribution impedances including distribution against a congested network, and the factoring of highway/transit pricing in trip distribution. These efforts should also take into consideration, and be coordinated with, statewide approaches to modeling being developed by the Statewide Modeling Task Force.
3. **Model Consistency:** The Metro-Dade MPO would be substantially benefitted by establishing a process to guarantee the consistency of modeling updates in order to ensure that local transportation agencies are using the same versions of the current model and to ensure that modeling assumptions used in the transportation planning process are shared.

VIII. Meetings with Representatives of the General Public and Local Elected Officials

A. General Public

The site visit included a meeting with Citizens' Transportation Advisory Committee (CTAC) and the general public. Members of the committee commented on their satisfaction with the openness of the public involvement process and the responsiveness of the MPO staff to their requests. CTAC was able to participate in the development and review of the Dade County Public Involvement Process (DCPIP) adopted in February of 1995. Committee members expressed the belief that they play a proactive part in the development of planning products. Their input in the early stages of the process allows them to have a direct impact on the final planning decisions.

Discussion also centered around CTAC members' ideas for enhancing public involvement. Suggestions included: the creation of informational flyers that would be mailed to new home owners describing the local planning process and opportunities for their involvement, increased federal funding to support public information and involvement, and the creation of a radio information or telephone hotline for the sight impaired.

B. Local Elected Officials

During the site visit, a meeting was held with members of the MPO Governing Board, the MPO Director, representatives of FDOT, local elected officials, and members of the public. The MPO Board represents elected local officials because it includes the thirteen district County Commissioners. The meeting was televised on local access channels for the general public as are all meetings involving the MPO Governing Board.

The public officials had generally favorable comments regarding the transportation planning process and their opportunities to actively participate. Much of the discussion focused on the time required to implement projects due to federal requirements and flexibility of funding. Concerns were raised regarding the ability of state and local officials to preserve land in and around transportation corridors, and problems exacerbated by land speculation. Many of the commentators see these problems as resulting from the long delays in obtaining federal approval for projects before they can move forward with right-of-way acquisition. The idea of a federal or state trust fund to purchase land to address this problem was discussed.

Conclusions

As reflected in the observations and recommendations throughout this Final Report, the federal team identified several areas where the MPO and the participating agencies in the local transportation planning process have successfully implemented comprehensive and coordinated planning practices. In particular, these include the following areas:

- Cooperation between state and local agencies and the MPO.
- Multimodalism.
- Development of an integrated management system.
- Public involvement process.

Conversely, the federal team identified specific areas to be addressed in order to continually improve the transportation planning process in the Miami metropolitan area. These include the following areas:

- Timely update of the Long Range Transportation Plan (LRTP).
- Specification of project identification criteria.
- Incorporation of a regional long-range vision into the LRTP.
- Improvements to travel demand modeling.

Appendix A

Membership and Voting, Metro-Dade MPO Governing Board

Representative of	Board	Members Votes
Dade County Commissioners	13	13
An Elected Municipal Official	1	1
Citizen Representative of Unincorporated Dade County	1	1
Member of the Dade County School Board	<u>1</u>	<u>1</u>
Total	16	16
Florida Department of Transportation	2	non-voting

Notes The region has no provision for weighted voting.

The Metro-Dade Transit Agency is a county agency and thereby represented on the Governing Board by the thirteen County Commissioners.

Appendix B

Local Participants in the EPR of the Miami Metropolitan Area

Metro-Dade MPO

Jose-Luis Mesa
Irma San Roman
Carlos Roa
Terrence Taylor
Frank Baron
Oscar Camejo
Michael Moore
Jesus Guerra

FDOT

Jose Abreu
Servando M. Parapar
Jim Scully
Robert Magee
Fernando Villabona
Todd Leachman
Carlos Garcia
Albert A. Dominguez
Debora Rivera
Phil Steinmiller
David Korros
David Henderson
Rene R. Rodriguez
Carl Filer

MDTA

Alex Rey Panama
Mario G. Garcia
Terry McKinley
Wilson Fernandez
Pam Levin
Maria Batista
Lynda Kompelien
Doug Greist
King Elliot

Metro-Dade Planning Dept.

C.W. Blowers
Bruce Epperson

Tri-Rail

Jeffrey D. Jackson
Loraine Kelly
David Daniels

Dade County DERM

Bruce Coward
H. Patrick Wong

Dade County ADA Office

Gayle Krause

Dade County Public Schools

L.A. Valentine
Yvette Phillips

Metro-Dade MPO Committee Members

Wayne Whisler, Former CTAC Chairman
Ted Silver, BPAC

Consultants

David Plummer, David Plummer Associates
Jeffrey Parker, ICF Kaiser (subcontractor)
Winsome Bowen, ICF Kaiser
Herb Vargas, Post, Buckley, Schuh & Jernigan
Alan Parker, ICF Kaiser
Maria Nuevo, ICF Kaiser
Bill Anido, Parsons Brinckerhoff
Myrna Valdez, Parsons Brinckerhoff
Betty Sanchez, Bermello Ajamic & Partners
Tim Plummer, David Plummer Associates
Libby Rodriguez, Gannett Fleming
David Bredahl, Gannett Fleming
Myung-Hak Sung, Gannett Fleming

Miscellaneous Participants

William Goodwin, Ryder Dedicated Logistics
Ted Reed, Miami Herald

Regional Agency Participants

Ping Chang, South Florida RPC
Jay Gross, Broward Cty. Trans. Planning
Howard Glassman, FL MPO Advisory Council
Bruce Offord, SED Dept. of Envir. Protection
Joe Grimes, Chamber South
Ed Pombier, Community Civic Center TMO

Local Officials, Board and TPC Member Session Attendees

MPO Board Members

County Board Chairman Arthur E. Teele
County Board Commissioner Maurice Ferre

Local Officials

Assistant County Manager J.A. Ojeda, Jr.
Mayor Raul Martinez, City of Hialeah

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County Board Commissioner Betty Ferguson	Mayor DeMilly, City of Homestead
County Board Commissioner Gwen Margolis	Mayor Daisy Black, City of El Portal
County Board Commissioner Katy Sorenson	FL Transp. Comm. Herminio San Roman
Mayor Raul Valdes-Fauli, City of Coral Gables	
Dade County Schoolboard Chairman Robert Renick	

Appendix C

Agenda for the EPR Site Visit to the Miami Metropolitan Area

March 20 to March 23, 1995

Monday March 20, 1995

Location: Stephen P. Clark Center
111 N.W. First Street
18th Floor, Room # 4

10:00 - 11:30 Federal Team Meeting

11:30 - 12:30 Lunch

12:30 - 1:00 **Introductions--Objectives of the Enhanced Planning Review**

Ben Williams, FHWA Region 4
Sam Zimmerman, FTA Headquarters

Federal Team
FHWA/FTA Regional Staff
FHWA Division Staff
FHWA/FTA Headquarters Staff
US DOT/Volpe Center Staff

Local Participants (Local participants are requested to participate in all sessions.)
Metro-Dade Metropolitan Planning Organization (Metro-Dade MPO)
Transportation Planning Council (TPC)
Florida Department of Transportation (FDOT)
District and Central Districts
Florida Department of Environmental Protection (FDEP)
Dade County Environmental Resources Management Department (DERM)
Metro-Dade Transit Agency (MDTA)

Overview of the Enhanced Planning Review

William Lyons, US DOT/Volpe Center

Format for all sessions--Brief overview of local approach to topic by regional agencies followed by a discussion with the Federal Team.

1:00 - 2:30 Local Transportation Issues (Economic, Demographic Trends, Land Use Planning, etc.)

Federal Team Discussion Leader: Status/Update/Discussion
Victoria Bernreuter, FHWA Florida Division

Metro-Dade MPO/TPC
FDOT, MDTA, South Florida RPC
Tri-County CRA

2:30 - 5:00 Organization of Planning Process and Integration of Planning Activities

- Coordination between MPOs
- Integration of land use and transportation planning
- Products of the Process including the Long-Range Plan, TIP & UPWP

Federal Team Discussion Leader: Status/Update/Discussion
Ben Williams, FHWA Region 4

Metro-Dade MPO/TPC
FDOT, MDTA, South Florida RPC
Tri-County CRA, Broward County MPO
Palm Beach County MPO

Tuesday March 21, 1995

Location: Stephen P. Clark Center
111 N.W. First Street
18th Floor, Room # 4

8:30 - 10:00 Consideration of the Fifteen Factors

Federal Team Discussion Leader: Status/Update/Discussion
Victoria Bernreuter, FHWA Florida Division

Metro-Dade MPO/TPC
FDOT, MDTA, FDEP, DERM, USEPA

10:00 - 11:30 Planning Process and CAAA Conformity

Federal Team Discussion Leader: Status/Update/Discussion
Larry Anderson, FHWA Region 4

Metro-Dade MPO/TPC
FDOT, MDTA, FDEP, DERM, USEPA

11:30 - 1:00 Lunch

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1:00 - 3:00 Financial Planning, Financial Constraint and Flexible Funding

Federal Team Discussion Leader: Status/Update/Discussion
Victoria Bernreuter, FHWA Florida Division

Metro-Dade MPO/TPC
FDOT, MDTA

3:00 - 4:00 Major Investment Studies

Federal Team Discussion Leader: Status/Update/Discussion
Ben Williams, FHWA Region 4

Metro-Dade MPO/TPC
FDOT, MDTA

4:00- 5:00 Demand Modelling and Forecasting

Federal Team Discussion Leader: Status/Update/Discussion
Ben Williams, FHWA Region 4

Metro-Dade MPO/TPC
FDOT, MDTA

Wednesday March 22, 1995

Location: Port Department
 Port of Miami
 1015 North American Way

9:00 - 2:00 Multi-modalism

Federal Team Discussion Leader: Status/Update/Discussion
Victoria Bernreuter, FHWA Florida Division

Metro-Dade MPO/TPC
FDOT, MDTA, SFRPC
Tri-County CRA
Freight Industry, Bicycle Association, Cruise Industry

Location: Commission Chambers
Stephen P. Clark Center
111 N.W. First Street
2nd Floor

2:30 - 4:00 Meeting with Local Officials, Board or TPC Members

Federal Team Discussion Leader: Status/Update/Discussion
Roger Krahl, FTA Region IV

Metro-Dade MPO Board,
Elected Officials
General Public

Location: Stephen P. Clark Center
111 N.W. First Street
18th Floor, Room #2

4:30 -5:30 Public Involvement Process

Federal Team Discussion Leader: Status/Update/Discussion
Roger Krahl, FTA Region IV

Metro-Dade MPO/CTAC
FDOT, MDTA, SFRPC
Tri-County CRA, FDEP,
Dade County Environmental Resources Management Department

Evening Federal Team Meeting to Discuss Preliminary Findings

Thursday March 23, 1995

Location: Stephen P. Clark Center
111 N.W. First Street
12th Floor Conference Room

8:30 - 9:30 Integration of Long-Range and Strategic Transit Planning

Federal Team Discussion Leader: Status/Update/Discussion
Roger Krahl, FTA Region IV

Metro-Dade MPO/TPC
FDOT, MDTA, SFRPC
Tri-County CRA

9:30 - 10:30 Congestion Management Systems and other Management Systems

Federal Team Discussion Leader:
Ben Williams, FHWA Region 4

Status/Update/Discussion

Metro-Dade MPO/TPC
FDOT, MDTA, FDEP

10:30 - 11:30 Federal Team Meeting to Discuss Findings

11:30 - 12:30 Federal Team Presentation of Preliminary Findings and MPO Response

Federal Team

Local Participants

Appendix D

List of Documents Reviewed

1. Year 2010 Metro-Dade Transportation Plan, County and Individual Area Summaries, Metro-Dade MPO, 1990.
2. Metro-Dade Transportation Plan and Improvement Priorities, Long Range Element (To the Year 2010), Metro-Dade MPO, November, 1991.
3. Resolution No. MPO 8-94: A Resolution Approving the Goal and Objectives Statements: Metro-Dade Transportation Plan to the Year 2015, MPO Governing Board, March 17, 1994.
4. December 18, 1994 MPO Plan Updates (2015 Long Range Plan Model Validation, Interim Congestion Management System, ISTEA 15 Factors), Metro-Dade MPO, December 16, 1994.
5. Long Range Transportation Plan Update, Technical Memorandum No. 9, Financial Resources, Gannett Fleming Engineers and Planners, URS Consultants, Inc., December 22, 1994.
6. Transportation Improvement Program, Fiscal Year 1995-1999, Metro-Dade MPO, May 12, 1994.
7. 1995 Unified Planning Work Program for Transportation, Metro-Dade MPO, June, 1994.
8. Prospectus for Transportation Improvements, Metro-Dade MPO, March, 1994.
9. Conformity of the 1995-99 TIP, 2010 LRP with the Amendments to the 1990 Clean Air Act, Metro-Dade MPO, April, 1994.
10. Public Involvement Process, Metro-Dade MPO, February, 1995.
11. Metro-Dade Transit Agency Strategic Management Plan Update 1995, Draft Appendix A, CUTR, February, 1995.
12. Metro-Dade Transit Agency MDTA Situation Audit, Draft Appendix B, CUTR, February, 1995.
13. Metro-Dade Transit Agency Strategic Management Plan Executive Summary, Ernst & Young, January, 1991.
14. Strategic Plan for Advanced Public Transportation Systems for Metro-Dade Transit Agency, CUTR, December, 1993.

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15. Offer to the U.S. Department of Transportation IVHS Field Operational Test Program, Passenger Information Display System, Metro-Dade MPO, August, 1993.
16. On the Move in Metro-Dade County, Executive Summary of the CUTR/Metro-Dade Technical Assistance Project, CUTR, no date.
17. East-West Multi-modal Corridor Study & Miami Multi-modal Center Study, Project Update, FDOT, March, 1995.
18. Dade County Metropolitan Planning Organization Mobility Management Process Status Report: March 1995, David Plummer & Associates, Inc., March, 1995.
19. (Draft Paper) Development of a Prototype Integrated Management System, Creasey, F. Thomas of Wilbur Smith Associates, Dominguez, Albert A. of FDOT Multi-modal Planning Office.
20. Miami Urbanized Area Congestion Management System Technical Memo Number 1 Institutional Issues, David Plummer & Associates, Inc., November 15, 1994.
21. Investigation of Alternative TMAs, Metro-Dade Congestion Management Program, Barton-Aschman Associates, Inc., October, 1994.
22. Civic Center Pedestrian Amenities and Safety Study, Metro-Dade Congestion Management Program, Barton-Aschman Associates, Inc., October, 1994.
23. South Beach Bicycle and Pedestrian Study, Metro-Dade Congestion Management Program, Barton-Aschman Associates, Inc., January, 1995.
24. Countywide Parking Policy Study, Executive Summary, CUTR, December, 1994.
25. Dade County Transportation System Emergency Preparedness Study, Summary, Post, Buckley, Schuh & Jernigan, Inc., The Gothard Group, Inc., Hazards Management Group, Inc., Herbert Saffir Consulting Engineers, Marlin Engineering, Inc., 1994.
26. S.W. 136th Street Transit Station Location and Busway Overpass Feasibility Assessment, Final Report, Parsons Brinckerhoff Quade & Douglas, Inc., March, 1994.
27. Airport Area Multi-modal Access Study, Final Report Executive Summary, Metro-Dade MPO and Frederic R. Harris, Inc., no date.
28. Congestion Mitigation: Public-Private Partnerships Study, Executive Summary, The Corradino Group and Carr Smith Associates, no date.
29. Airport-Seaport Rail Connection and Airport Multi-modal Facility, Status Report, Metro-Dade MPO, January, 1992.

30. Biscayne Boulevard Transportation Enhancement Study, Kimley-Horn and Associates, Inc., August, 1994.
31. Dade County Transit Corridors Transitional Analysis, Corridors Evaluation Report, Executive Summary, Parsons Brinckerhoff Quade & Douglas, Inc., KPMG/Peat Marwick, Post, Buckley, Schuh & Jernigan, Inc., Maria Elena Torano Associates, Inc., Barbara Howard & Associates, Allen & Associates, Carr Smith & Associates, no date.
32. Golden Glades Multi-modal Transportation Facility Feasibility Study Executive Summary, ICF Kaiser, March, 1994.
33. Dade County TMA Evaluation Methodology, Technical Memorandum No. 1, Literature Search and TMA Survey, ATE Management & Service Company, Inc., January, 1995.
34. Dade County TMA Evaluation Methodology, Technical Memorandum No. 2, Optimal TMA Traffic Congestion Evaluation Measures, ATE Management & Service Company, Inc., January, 1995.
35. Proposals for Transit Corridor Investments in Dade County: An Assessment, CUTR, April, 1994.
36. Dade County Transportation Authority Evaluation Report (Draft Final), Kimley-Horn and Associates, Inc., Barbara Howard and Associates, Inc., February, 1994.
37. Transportation Planning for State Purposes, State Transportation Policy Initiative, CUTR, June, 1994.
38. Transportation, Land Use and Sustainability, State Transportation Policy Initiative, CUTR, October, 1994.
39. Moving People in Florida: Transit, TDM and Congestion, State Transportation Policy Initiative, CUTR, May, 1994.
40. West Palm Beach Urban Area Transportation Study, Executive Summary, Kimley-Horn and Associates, Inc., October, 1988.
41. Technical Report #3, Plan Development and Adoption, West Palm Beach Urban Area Transportation Study, Kimley-Horn and Associates, Inc., September, 1988.
42. Long-Range Plan Update Status Report for the Broward County MPO, Broward County Department of Strategic Planning and Growth Management, December, 1994.

43. Year 2010 Transportation Plan, Technical Memorandum No. 8, Executive Summary, Broward County Department of Strategic Planning and Growth Management, March, 1993.
44. Southeast Florida Intelligent Corridor System, FDOT Office of Multi-modal Planning, no date.
45. "Think We're Overcrowded? Just Wait.....," Whoriskey, Peter, The Miami Herald, Page 1, Thursday, March 23, 1995.
46. Reapportionment Letter from Governor of Florida to Palm Beach County MPO, Office of the Governor, March 23, 1993.
47. Reapportionment Letter from Governor of Florida to Broward County MPO, Office of the Governor, March 23, 1993.

